TEST REPORT

REPORT no
R-NFX170510 PMa/PMa

LABORATORY FUME HOOD
equipped with the filtering system
« GF4 – AS »

Performed by : **INTERTEK TESTING SERVICES**

At the request of : **ERLAB S.A.S.**

- INTERTEK TESTING SERVICES is an inspection, control, calibration, qualification and procedure validation organization.
- As such, our responsibility involves the sending of people qualified for their tasks, and the implementation of appropriate and calibrated equipments and of tests in accordance with pre-established procedures.
- The procedures can be provided by INTERTEK TESTING SERVICES, the Customer or stemmed from official standards or from non standard professional practices.
- The present report refers to all the tests performed on the concerned site.
- The report gives the whole test evidences (100 % of raw data, certificates, methods, equipments) that the Customer may exploit his own way.
- These functioning rules guarantee the reliability of INTERTEK TESTING SERVICES interventions.

Intertek network: more than 1,000 laboratories and offices and over 25,000 people in 100 countries around the world

Pascal MANDIN
Chemical Development Engineer
Intertek France

Author : Pascal MANDIN Function : Chemical Dev. Engineer Signature : Date : Aug 6th 2010

FOREWORD

At the request of **ERLAB S.A.S.**

following our proposition no **C0P0054 OTi/OTi**

and your order form no **8800**

the tests described in the present report,

were performed at : **R&D Laboratory of ERLAB S.A.S.**
Parc d'Affaires des Portes
Voie du Futur
27104 VAL DE REUIL cedex - France

Tests performed following the procedure provided by the customer, entitled "Efficiency test with solvants on a Recirculatory filtration fume cupboard", this procedure being in accordance with the NF X 15-211 (May 2009) standard.

The intervention was performed on June 1st and 2nd, 2010 by :

Mr. Pascal MANDIN
Chemical Development Engineer
INTERTEK TESTING SERVICES
ZAC Ecoparc 2
27400 HEUDEBOUVILLE - FRANCE

The results described in the present report concern only the equipments subjected to tests.

Forbidden reproduction of the present test report without the authorization of INTERTEK TESTING SERVICES.

This report comprises 171 pages (with annexes).

SYNOPSIS

I. CONCLUSION

The matter of the present study is to guarantee the compliance of a prototype of laboratory fume hood equipped with the filtering system « GF4 – AS » in accordance with some of the requirements of the NF X 15-211 (May 2009) standard specifying the classification and the characteristics of the enclosures for toxics with recirculating air filtration.

The test conditions and requirements imposed by NF X 15-211 were respected during the tests. The minor deviations noticed have never been likely to call advantageously the test results into question.

In the conditions imposed by the standard, it was noticed that one independent filtering module subjected to tests was able to filter 667 grammes of isopropanol or 975 grammes of cyclohexane before reaching a reject concentration, downstream from the filtering system, of 1% of the retained Occupational Exposure Limit for each chemical agent (highest concentration imposed by the standard).

Moreover it was noticed that the safety operating time greatly exceeds 1/12th of the normal operating time, as asked by the standard, for both isopropanol and cyclohexane tests.

Considering these results and the conditions that led to them, the prototype of laboratory fume hood equipped with the filtering system « GF4 – AS » is fully compliant with the requirements of filtration efficiency of volatile organic compounds (§5.4) of NF X 15-211.

However these conclusions must not prejudge the later test results that the prototype may obtain in accordance with other requirements of NF X 15-211, particularly the filtration test for acid vapors and the confinement test.

II. PERFORMED TESTS AND OPERATING CONDITIONS

The matter of the present study is to guarantee the compliance of a prototype of laboratory fume hood equipped with the filtering system « GF4 – AS » in accordance with some of the requirements of the NF X 15-211 (May 2009) standard (« the standard ») specifying the classification and the characteristics of the enclosures for toxics with recirculating air filtration.

According to the criteria given in §4 of this standard, the tested fume hood is an enclosure with safety reserve (class 1) with type V filters (vapors filtration).

The present report refers to the test results for the §5.4 requirement of the standard (« Filtration »), without prejudging the test results that the prototype may obtain in accordance with other requirements of the standard.

The matter of the §5.4 requirement is to assess the filtration performance of the fume hood under precise operating conditions. Indeed the filtering system of a class 1 enclosure with recirculating air filtration shall prevent the rejected air, downstream from the filtering system, from exceeding a concentration of chemical agent of :

- 1 % of the occupational exposure limit (OEL) during the normal operating time
- 50 % of the occupational exposure limit (OEL) during the safety operating time

The OEL adopted by the standard (§6.1.1) for these three chemical agents are :

- isopropanol : 400 ppm
- cyclohexane : 200 ppm
- hydrochloric acid : 5 ppm

Moreover the safety operating time shall exceed $1/12^{th}$ of the normal operating time. The terms « normal operating time » and « safety operating time » are defined in the §3 of the standard.

The §5.4 requirement of the standard prescribes different filtration tests to be performed depending on the filters installed :

- in the case of filters for volatile organic compounds : two successive tests, one with isopropanol, the other with cyclohexane ; each test shall be performed with a new filter.
- in the case of filters for acid vapors : one test with hydrochloric acid.

The customer submits a universal filtering system, supposed to filter both volatile organic compounds and acid vapors. That is why the three tests (isopropanol, cyclohexane, hydrochloric acid) shall be performed with the same model of filtering device. The final assembly consists of the superposition of one main filtering device, then an air aspiration system, then a security filtering device strictly identical to the first one. The superposition is airtight so that all the air caught under the main filtering device is rejected above the security filtering device.

The test method consists of evaporating a constant and known concentration of a chemical agent in the enclosure functioning its usual way and regularly analyzing the air at the exhaust point downstream from the filtering system. The test shall be performed during 8-hour-runs between which at least 16 hours are waited if ever several runs are necessary. The concentrations to be evaporated in the enclosure are :

- isopropanol : 200 ppm
- cyclohexane : 200 ppm
- hydrochloric acid : 50 ppm

The present document makes a report only for the results obtained for the « isopropanol » and « cyclohexane » tests. The « hydrochloric acid» test has not been performed yet at the day of the writing of the present report.

A. NORMATIVE OPERATING CONDITIONS

Precise operating conditions are given in §6.1 of the standard. The following conditions shall be respected during the tests :

1. Temperature and relative humidity

The tests shall be performed at 20±2°C and with a relative humidity between 40% and 70%. The heating unit shall not increase the internal temperature of the enclosure by more than 5°C over the temperature in the closed test volume.

2. Closed test volume

The enclosure shall be set in a closed test volume (« bubble »). The internal volume of the bubble shall be between 10 and 50 times the internal volume of the enclosure.

3. Chemical agent evaporation

The chemical agent shall be introduced with a peristaltic pump, drop by drop into a heated container set at the middle of the working bench of the enclosure. During the whole test, the system shall be set so as to generate the desired concentration in the enclosure, with a ± 10% tolerance, for the duration of the test.

4. Air sampling

Air samples shall be taken in three areas :

- « entry » area, 30 cm upstream from the filtering system (in the enclosure)
- « exit » area, 30 cm downstream from the filtering system
- « respiratory tracts » area, in front of the enclosure, level with the respiratory tracts of a person

The standard makes it clear that the sampling method shall prevent the deterioration of the air samples between the sampling area and the analyzer. Moreover a sampling representative of the analyzed air shall be set, for example with multipoint sampling grids.

5. Analyzer

The standard recommends for the analysis of organic vapors the trapping of a known volume of the air to be sampled through an adsorbing cartridge. This sample shall then be desorbed with a carbon disulfide solution (CS_2) before being analyzed with Gas Chromatography with a FID detector.

The standard makes it clear that any other equivalent method can be used.

B. TEST OPERATING CONDITIONS

The type of tested laboratory fume hood is a laboratory fume hood Captair® Flex ® M391.

1. Temperature and relative humidity

A thermo-hygrometer is set inside the enclosure, another thermo-hygrometer is set in the bubble outside the enclosure. Recording of :

- temperature and relative humidity inside the enclosure, and
- temperature outside the enclosure

is allowed every minute by a wire-free connection to an acquisition software.

Temperature and relative humidity raw data are attached to the present report, with corresponding graphics.

Isopropanol test :

- relative humidity between 39.1% and 46.3%
- temperature inside the enclosure between 25.0°C and 28.4°C
- temperature outside the enclosure between 24.4°C and 27.9°C
- temperature difference between inside and outside the enclosure never more than 0.6°C

Cyclohexane test :

- relative humidity between 42.9% and 46.0%
- temperature inside the enclosure between 23.5°C and 27.0°C
- temperature outside the enclosure between 23.3°C and 26.5°C
- temperature difference between inside and outside the enclosure never more than 0.5°C

The relative humidity remains inside the acceptance criteria (40-70%).

The temperature difference between inside and outside the enclosure remains inside the acceptance criteria (< 5°C).

The test temperatures (inside and outside) both exceed the acceptance criteria of the standard (20°C ± 2°C). However numerous references[1] have shown that a higher temperature makes easier the desorption of chemical agents and therefore is detrimental to the filtration efficiency. Therefore this deviation from the standard is not likely to call advantageously the test results into question.

2. Closed test volume

The bubble is a cube with internal dimensions 314 cm by 318 cm by 173 cm, i.e. a volume of 17,27 m^3.

The enclosure is trapezoid-shaped with dimensions 97 cm by 57 cm at the bottom, 97 cm by 50 cm at the top, and 87 cm high, i.e. a volume of 0,45 m^3.

The volume of the bubble is about 38 times the volume of the enclosure, which is inside the acceptance criteria of the standard.

[1] LE CLOIREL, Les composés organiques volatils (COV) dans l'environnement, Tec&Doc Ed., 1998, 454-455

3. Chemical agent evaporation

A ceramic shallow dish (approximately 100 mm in diameter) containing pumice stone "anti-bumping" beads is placed onto an electrically heated hotplate Stuart SB160 centrally located on the base of the fume cupboard. The temperature is set as to instantly evaporate the chemical agent (about 150°C).

A Viton tube placed in a 2.5 L bottle of propan-2-ol is connected through a peristaltic pump Heidolph Pumpdrive 5001 to a discharge tube positioned over the centre of the dish.

The 2.5 L bottle of isopropanol is placed on an electronic top pan balance PRECISA XB6200D (0.1 g precision) linked to a dedicated acquisition software BALINT V4.00, recording the decreasing weight every minute.

All this apparatus fully complies with the normative conditions of §6.1.3 of the standard.

The fume cupboard and the balance are placed in a closed room called "bubble", with transparent walls so that the system can be watched closely. The peristaltic pump is placed outside the "bubble" so that the solvent flow can be adjusted during the tests if necessary.

The pump flow is manually set as to get the desired mass flow (measured by weight difference in 1 minute). The mass flow m (in g/min) is calculated as a function of the extract volume flow rate Q (in m^3/h), the desired concentration of isopropanol in the enclosure C (in ppm) and the molar weight of the chemical agent M (in g/mol), by the following formula :

$$m\,(g/min) = \frac{Q\,(m^3/h) \times C\,(ppm) \times M\,(g/mol)}{24 \times 60 \times 1000}$$

The extract volume flow rate Q is first calculated as a function of the surface of the sash opening S (in m^2) and the mean air face velocity V (in m/s), measured with an anemometer following the §5.2 of the NF EN 14175-3:2003 standard, by the following formula :

$$Q\,(m^3/h) = V\,(m/s) \times S\,(m^2) \times 3600$$

The sash opening throughout all the tests was two trapezoid-shaped holes in the sash plane to allow the introduction of the two hands of the operator inside the enclosure. Each hole had a surface of 0.06198 m^2 so that the total surface S was equal to 0.124 m^2.

The anemometer is set in the plane of sash, its axis being perpendicular to the plane. As a precaution, the operator takes up his position beside the enclosure not to disturb the air flow. The measurements take place in four points (two for each hand-opening), with more than 5 cm from any edge of the sash opening and at least 10 cm from each other. The anemometer calculates and records the mean air velocity during 1 minute at each point, with a measurement every 5 seconds.

This procedure fully complies with the normative conditions of §6.1.3 of the standard.

Calculations of the mass flows m for the isopropanol and the cyclohexane tests :

- **Isopropanol test**
  - air face velocities measured in four points, gave the following values in m/s : 0,49 ; 0,53 ; 0,50 ; 0,53 ; that is a mean velocity V equal to 0,5125 m/s.
  - extract volume flow rate Q then equal to 228,78 m^3/h.

- desired concentration 200 ppm
- molar weight equal to 60,10 g/mol
- **that is an evaporated mass flow equal to 1,91 g/min ± 10% (between 1,7 g/min and 2,1 g/min).**

The weight recording during the cyclohexane test shows that 432 weight values were recorded, among which 85 values were less than 1,7 g/min (the lowest being 1,1 g/min) and 1 value was higher than 2,1 g/min (this value being 2,2 g/min). That means that 80,1 % of the values were inside the acceptance criteria.

The highest value is obviously a small weighing accident which does not alter the final adsorption result.

The number of values lower than the acceptance criteria cannot be considered as negligible. However numerous references[2], following Freundlich and Langmuir adsorption model, have shown that the lower the challenge concentration evaporated in the cupboard, the lower the adsorption capacity of filtering systems, so that a too low evaporation mass flow is detrimental to the filtration efficiency. Therefore this deviation from the standard is not likely to call advantageously the test results into question.

- **Cyclohexane test**
  - air face velocities measured in four points, gave the following values in m/s : 0,53 ; 0,54 ; 0,53 ; 0,52 ; that is a mean velocity V equal to 0,530 m/s.
  - extract volume flow rate Q then equal to 236,6 m^3/h.
  - desired concentration 200 ppm
  - molar weight equal to 84,16 g/mol
  - **that is an evaporated mass flow equal to 2,77 g/min ± 10% (between 2,5 g/min and 3,0 g/min).**

The weight recording during the cyclohexane test shows that 376 weight values were recorded, among which 17 values were less than 2,5 g/min (the lowest being 2,0 g/min) and 8 values were higher than 3,0 g/min (the highest being 3,4 g/min). That means that 93,4 % of the values were inside the acceptance criteria. However the number of out-of-criteria values was small enough and the minimum and maximum values were close enough to the acceptance criteria for the final adsorption result not to be noticeably altered.

The calibration of the precision balance with certified weights showed a small deviation of 0,12 % between nominal weight and measured weight. This deviation is much lower than the ± 10% deviation authorized for the mass flow measurement.

4. Air sampling

Air samples are taken in three areas :
- « entry » area, upstream from the filtering system (in the enclosure)
- « exit » area, downstream from the filtering system
- « respiratory tracts » area, in front of the enclosure

The air is sampled with a multipoint sampling grid made of Teflon, linked to the analyzer by thin polypropylene and stainless steel tubings, which prevent from any sample contamination.

The « upstream » or « entry » sampling grid is made up of about fifteen equally distributed sampling nozzles, horizontally hanging in the enclosure by four thin stainless steel hooks, 30 cm under the filtering system.

[2] LE CLOIREL, Les composés organiques volatils (COV) dans l'environnement, Tec&Doc Ed., 1998, 450

The « downstream » or « exit » sampling grid is made up of about fifteen equally distributed sampling nozzles, horizontally lying on four thin Teflon legs 30 cm upon the filtering system.

The « respiratory tracts » sampling grid is a Teflon rod with five equally distributed sampling nozzles, horizontally hold 52 cm upon the working bench and 5 cm in front of the sash.

Therefore the requirements of the standard about air sampling are fully respected.

5. Analyzer

The analyzer is a Gas Chromatograph Varian CP-3800 equipped with a capillary column CP-Sil 8 CB Low Bleed/MS and a FID detector. Continuous air sampling from one of the three sampling ways (« entry », « exit » or « respiratory tracts ») is allowed thanks to a specific system using several valves, driven by the software driving the chromatograph itself. The air sample is then directed to a cryogenic trap cooled with CO_2, which concentrates the possibly present chemical agents in the air during a given time. The trap is finally quickly heated which desorbs the possibly present chemical agents towards the chromatograph injector. Separation, identification and quantification of the chemical agents are then classically performed by external calibration. All operations are stand-alone once the sample list is set up specifying the desired order for samplings.

Therefore the requirements of the standard about the analyzer are fully respected.

III. TEST RESULTS

In order to ensure the test integrity, a dated, inviolable seal is put across the test "bubble" doors, each time a test begins, so that it is impossible to reach and modify anything inside the "bubble" (weighing system, evaporation system, filtering device, air sampling system). Once the end of the test is reached, the integrity of the seal is checked before the seal is broken and the test is stopped.

A. « ISOPROPANOL » TEST

1. Calibration

Increasing concentrations of isopropanol are evaporated in the fume hood functioning its normal way, and the air in the enclosure is analyzed (« entry »). The operator manually sets up the peristaltic pump flow, then allows the evaporation to stabilize a few minutes before analyzing by chromatography. The sampling mass flow is calculated by weight difference during several minutes. The following table is obtained :

sampling date and time	chromatographic peak area (counts)	mean evaporation per minute during the 5 minutes before sampling (g)
31/05/2010 – 16:16	0	0 (blank)
19/05/2010 – 15:58	1068202	1.56
19/05/2010 – 16:22	1724629	2.32
25/05/2010 – 10:28	363757	0.62
25/05/2010 – 10:52	226870	0.46
25/05/2010 – 11:17	370572	0.683

A curve (found in annex) linking the area of the chromatographic peak of isopropanol to the evaporation mass flow is drawn. A linear trend curve is drawn (forced to zero), giving a R^2 factor equal to 0,9827 which is very reasonable considering the general working difficulty in the field of gas analysis.

Therefore the calibration shows a linear response of the analyzer for isopropanol evaporation rates lower or equal to 2,3 g/min (i.e. a concentration lower or equal to 240 ppm), with the following equation :

$$\text{Peak area (counts)} = 6722.1 \times \text{Concentration (ppm)}$$

2. Test

A new isopropanol flask still sealed at its opening is used for the test :
- manufacturer Panreac
- part no 131090
- serial no 180758

The evaporation begins at 10:48 am.

After reprocessing the chromatograms and compiling the weight data, the following table is obtained. The concentration is calculated thanks to the calibration curve :

$$\text{Concentration (ppm)} = \frac{\text{Peak area (counts)}}{6772.1}$$

sampling time	sampling area	chromatographic peak area (counts)	concentration (ppm)	evaporated mass (g)
10:58	exit	0	0	19.2
11:22	respiratory tracts	3316	0.49	62.9
11:46	exit	0	0	104.7
12:11	exit	0	0	146.2
12:35	exit	0	0	187.7
12:59	exit	0	0	229.6
13:24	exit	0	0	269.5
13:48	exit	0	0	309.4
14:13	exit	0	0	350.0
14:37	exit	0	0	393.9
15:02	exit	1200	0.18	436.6
15:27	exit	592	0.09	478.2
15:51	exit	2241	0.33	517.0
16:16	exit	3248	0.48	566.5
16:41	exit	4883	0.72	617.2
17:06	exit	7540	1.1	667.0
17:31	exit	12840	1.9	715.6

It is noticed that the concentration of 1% of the OEL of the isopropanol (4 ppm) is still not reached downstream from the filtering system after filtering **715 grammes in 6 hours and 33 minutes**. This test duration can be considered as :

	Duration	Evaporation	Max Concentration allowed	Measured Concentration
Normal Operating Time	6 hrs 03 min	667 g	4 ppm (1% OEL)	< 1.1 ppm
Safety Operating Time	30 min	48 g	200 ppm (50% OEL)	< 2 ppm
Total	6 hrs 33 min	715 g		

These results show that the filtering system subjected to tests was able to filter 667 grammes of cyclohexane during its Normal Operating Time. During this period the reject concentration, downstream from the filtering system, was lower than 1% of the retained Occupational Exposure Limit.

The level of 50% of the retained Occupational Exposure Limit was still not reached after an additional duration of 30 minutes (representing 1/12th of the Normal Operating Time).

B. « CYCLOHEXANE » TEST

1. Calibration

Increasing concentrations of cyclohexane are evaporated in the fume hood functioning its normal way, and the air in the enclosure is analyzed (« entry »). The operator manually sets up the peristaltic pump flow then allows the evaporation to stabilize a few minutes before analyzing by chromatography. The sampling mass flow is calculated by weight difference during several minutes. The following table is obtained :

Sampling date and time	chromatographic peak area (counts)	mean evaporation per minute during the 5 minutes before sampling (g)
18/05/2010 – 14:47	675812	0.76
18/05/2010 – 15:35	1265635	1.62
18/05/2010 – 15:59	1004872	1.34
18/05/2010 – 16:46	1716644	2.04
19/05/2010 – 14:46	3579448	3.44
31/05/2010 – 16:16	3920	0 (blank)
01/06/2010 – 16:55	2962909	2.84

A curve (found in annex) linking the surface of the chromatographic peak of cyclohexane to the evaporation mass flow is drawn. A linear trend curve is drawn (forced to zero), giving a R^2 factor equal to 0,9632 which is very reasonable considering the general working difficulty in the field of gas analysis.

Therefore the calibration shows a linear response of the analyzer for cyclohexane evaporation rates lower or equal to 3,4 g/min (i.e. a concentration lower or equal to 240 ppm), with the following equation :

$$\text{Peak area (counts)} = 13391 \times \text{Concentration (ppm)}$$

2. Test

The test was performed on June 1st, 2010.

A new cyclohexane flask still sealed at its opening is used for the test :
- manufacturer Panreac
- part no 13250
- batch no 117329

The evaporation is beginning at 9:26 am.

After reprocessing the chromatograms and compiling the weight data, the following table is obtained. The concentration is calculated thanks to the calibration curve :

$$\text{Concentration (ppm)} = \frac{\text{Peak area (counts)}}{13391}$$

sampling time	sampling area	chromatographic peak area (counts)	concentration (ppm)	evaporated mass (g)
9:36	exit	2487	0,19	28.9
10:02	exit	0	0,00	103.9
10:26	respiratory tracts	4625	0,35	173.3
10:50	exit	1656	0,12	242.6
11:14	exit	1981	0,15	309.8
11:39	exit	3108	0,23	379.1
12:03	exit	2928	0,22	446.1
12:27	exit	2052	0,15	514.5
12:51	exit	1970	0,15	582.8
13:15	exit	2957	0,22	652.6
13:40	exit	1845	0,14	721.9
14:04	exit	2284	0,17	788.1
14:28	exit	1793	0,13	854.7
14:53	exit	908	0,07	923.9
15:17	exit	2179	0,16	990.3
15:42	exit	3178	0,24	1056.8

It is noticed that the concentration of 1% of the OEL of the cyclohexane (2 ppm) is still not reached downstream from the filtering system after filtering **1056 grammes in 6 hours and 16 minutes.** This test duration can be considered as :

	Duration	Evaporation	Max Concentration allowed	Measured Concentration
Normal Operating Time	5 hrs 47 min	975 g	2 ppm (1% OEL)	< 0,35 ppm
Safety Operating Time	29 min	81 g	100 ppm (50% OEL)	< 0,35 ppm
Total	6 hrs 16 min	1056 g		

These results show that the filtering system subjected to tests was able to filter 975 grammes of cyclohexane during its Normal Operating Time. During this period the reject concentration, downstream from the filtering system, was lower than 1% of the retained Occupational Exposure Limit.

The level of 50% of the retained Occupational Exposure Limit was still not reached after an additional duration of 29 minutes (representing 1/12th of the Normal Operating Time).

ANNEXES

- TEST PROCEDURE
- MEASUREMENT EQUIPMENTS
- CALIBRATION CERTIFICATES
- WEIGHT DATA TABLES AND CHROMATOGRAMS
- MISCELLANEOUS

TEST PROCEDURE

See attached documents.

Efficiency test with solvants on a recirculatory filtration fume cupboard

Revision	Date	Author (name, visa)	Verifier (nom, visa)	Nomination of the modification	For approval (name, visa)
A		C.MERKEN	G.MASSE	Création du document	C.HERRY

1) Introduction

This method allows to determine the filtration efficiency of recirculatory filtration fume cupboard. In particular, this protocol describes the filtration efficiency for solvents. It was redacted in accordance with the NFX 15211 standard. During the test, we determine the relationship between the retention capacity of the installed filters and the exhaust concentration of chemicals, in accordance with the threshold limit values of the tested chemicals.

2) Bibliography

AFNOR NFX 15-211 standard: **Recirculatory filtration fume cupboard.**

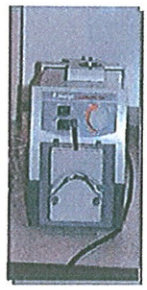
3) Method abstract

The reference chemical, choose for the test, is evaporated in the workspace enclosure in order to obtain a concentration in the air equal to 200 ppm. The filter exhaust concentration is measured with a GC-FID analyser.

The filtration system must guarantee a filter exhaust concentration lower than 1% of the TLV (in accordance with french TLV edited by the INRS) of the reference chemical during the normal operating phase of the filter, and lower than 50% of the TLV during the safety phase of the filter.

4) Material

- The tested recirculatory filtration fume cupboard
- 1 testing enclosure
- 2 thermo-hygrometers recorders TESTO
- 1 erlenmeyer
- 1 peristaltic pump with all its equipments (viton™ tubes…)
- 1 hot plate
- 1 chiller containing pumice stone for the evaporation of the product
- 1 exhaust conentration sampling grid
- 1 inlet concentration sampling grid
- 1 respiratory zone sampling line
- 1 VARIAN STAR 3800 gas chromatograph with a flame ionisation detector (vector gas : helium, detector gas: Air + Hydrogen) equipped with a specific injection system called SPT (SPT VARIAN + sampling valve + injection valves : see attached drawings)
- 1 analytical balance PRECISA XB 6200D (SN: 71493/3112-0534)
- 1 balance software : BALINT V4.00
- 1 hot wire anemometer : TSI velocicalc+ 8386 AMF (SN : 02010104)



6) Procedure

The tested recirculatory filtration fume hood equipped with its new filters is installed in the testing enclosure in order to produce real conditions of air recycling in a very confined space.

In order to recreate the particular conditions of the air recycling within the laboratory, the test is realized in a closed space. The tested fume hood is placed in the test volume while taking care to respect the minimum space from the testing enclosure panels: 30cm from the front, back and side.

The testing enclosure isolates the tested cabinet from the external disturbances. Energy, fluids and date connections were done in manner to minimize air leakage outside of the testing enclosure.

The reference chemical is evaporated in the workspace enclosure during all the duration of the test, at a known concentration equal to 200 ppm ± 20 ppm. Two successive tests with new filters are performed with the following chemicals:

- Cyclohexane
- Isopropanol

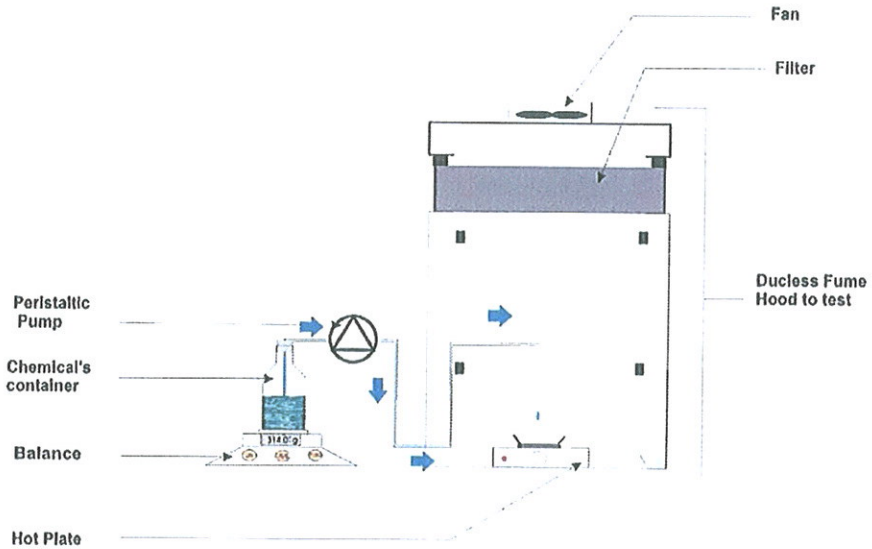
Evaporation is controlled in a precise way during all the duration of handling. For this, the evaporated mass is controlled permanently using a laboratory balance. Evaporation rate is determined by measuring the chemical container mass with regards to time. Evaporated chemical liquid phase is led to the zone of evaporation using a peristaltic pump. The liquid is evaporated permanently by dropping it on hotplate whose temperature was adjusted at the chemical product boiling point.

The filter exhaust concentration is measured in accordance with a method specific to each chemical product:

1. Trapping of the chemical with the SPT injector regulated at 45°C
2. Desorption of the STP trap at 180°C.
3. Injection of the desorbed sample on the GC column
4. Analysis

The two successive tests must be performed at a known temperature between 18°C and 22°C, and a known relative humidity, between 40 and 70%.

Every end of working day, the test is stopped after 8 hours of evaporation without interruption. If the test is not finished at the end of the day, the evaporation will continue after a period of interruption at least equal to 16 hours. The test is finished when the exhaust concentration reaches 50% of the TLV or when the duration of the safety phase reaches 1/12 of the duration of the normal operating phase.



➢ Calculation of the chemical flow rate.

- Calculation of the area of the working apertures S:
-

$S\ (m^2) = L \times h$

With:
L : apertures length in meters
H : aperture height in meters

- Measure of the air face velocity V (m/s)

The face velocity of the tested fume hood is measured with a calibrated hot wire anemometer. A 20 cm x 20 cm imaginary grid pattern is formed by equally dividing the design hood opening into vertical and horizontal dimensions. The anemometer probe is located at the center of each grid space. The anemometer probe is held in the plane of the aperture of the hood sash and perpendicular to the opening.

Face velocities are integrated over a period of at least 5 seconds.

The average face velocity (V) is recorded.

- Calculation of the air flow of the tested fume hood D

$D\ (m^3/h) = V \times S$

- Calculation of the equivalent volume Veq

V_{eq} (L/h) = D x C / 1000

C : Chemical concentration that must be evaporated during the test.

- Calculation of the Chemical flow Dt that must be set with the peristaltic pump

Dt (g / min) = (V_{eq} x M) / (24,45 x 60)

V_{eq} : Equivalent volume in L/h
M : Molecular weight (g/mol)
24,45 : constant 1mol of gaz = 24,45 L of gaz at 25°C

➢ Injection sequence on the CPG Varian

To carry out the efficiency test, it is necessary to analyze the concentration upstream and downstream the filter thanks to the injection system containing sampling loop.

➢ Launching of the efficiency test

1 – Determination of the fume hood air flow

⇩

2- Calculation of the flow rate of chemical that must be set with the peristaltic pump

⇩

3- Switch on the filtration fume hood test and control of the sampling grid

⇩

4- Fill an erlenmeyer with the reference chemical and put the container on the analytical balance.

⇩

5- Connect all the tubes and fit them to allow the evaporation of the chemical

⇩

6- Start the Balint software

⇩

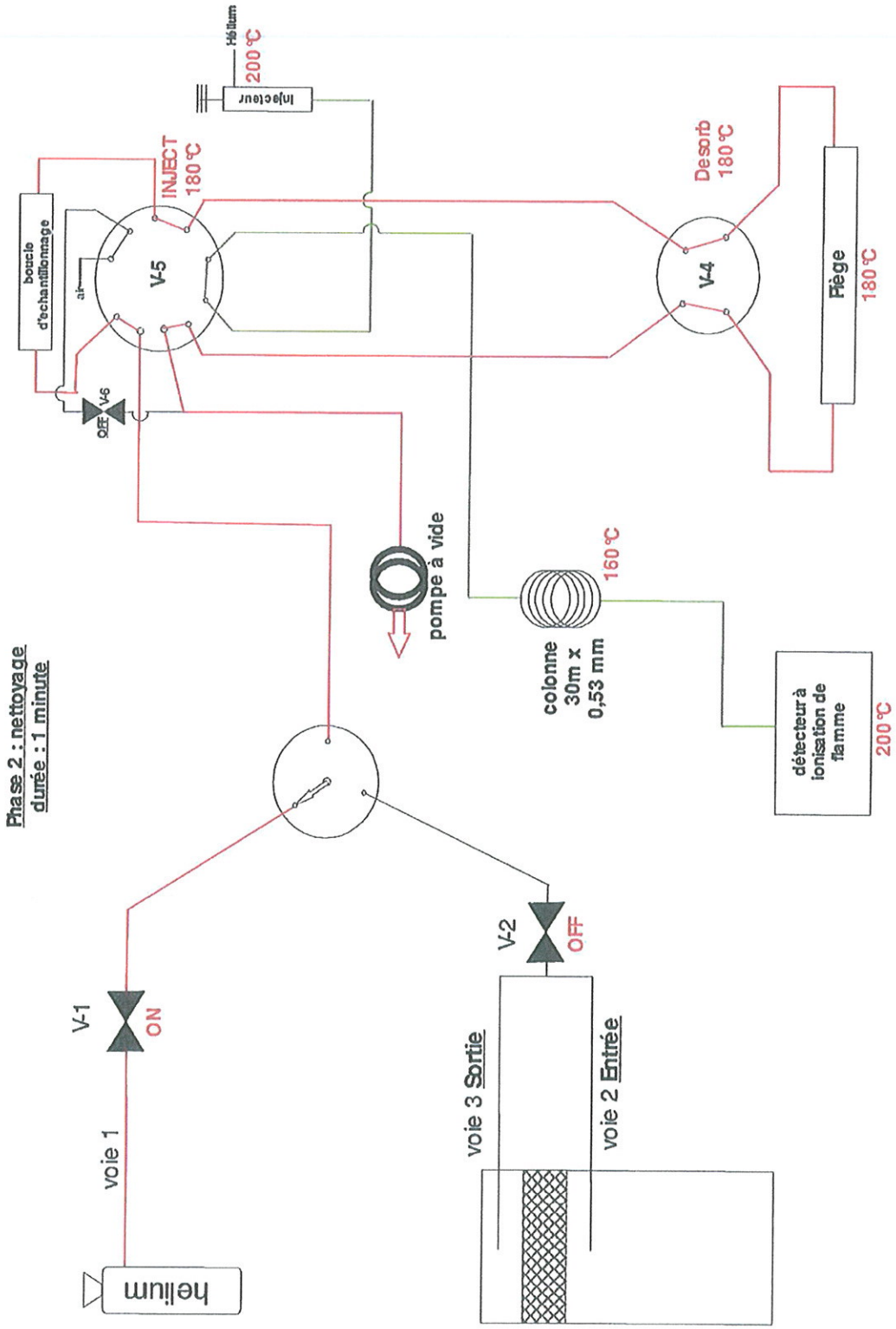
7- Switch on the peristaltic pum and set up the flow rate of the chemical in compliance with the calculated flow.

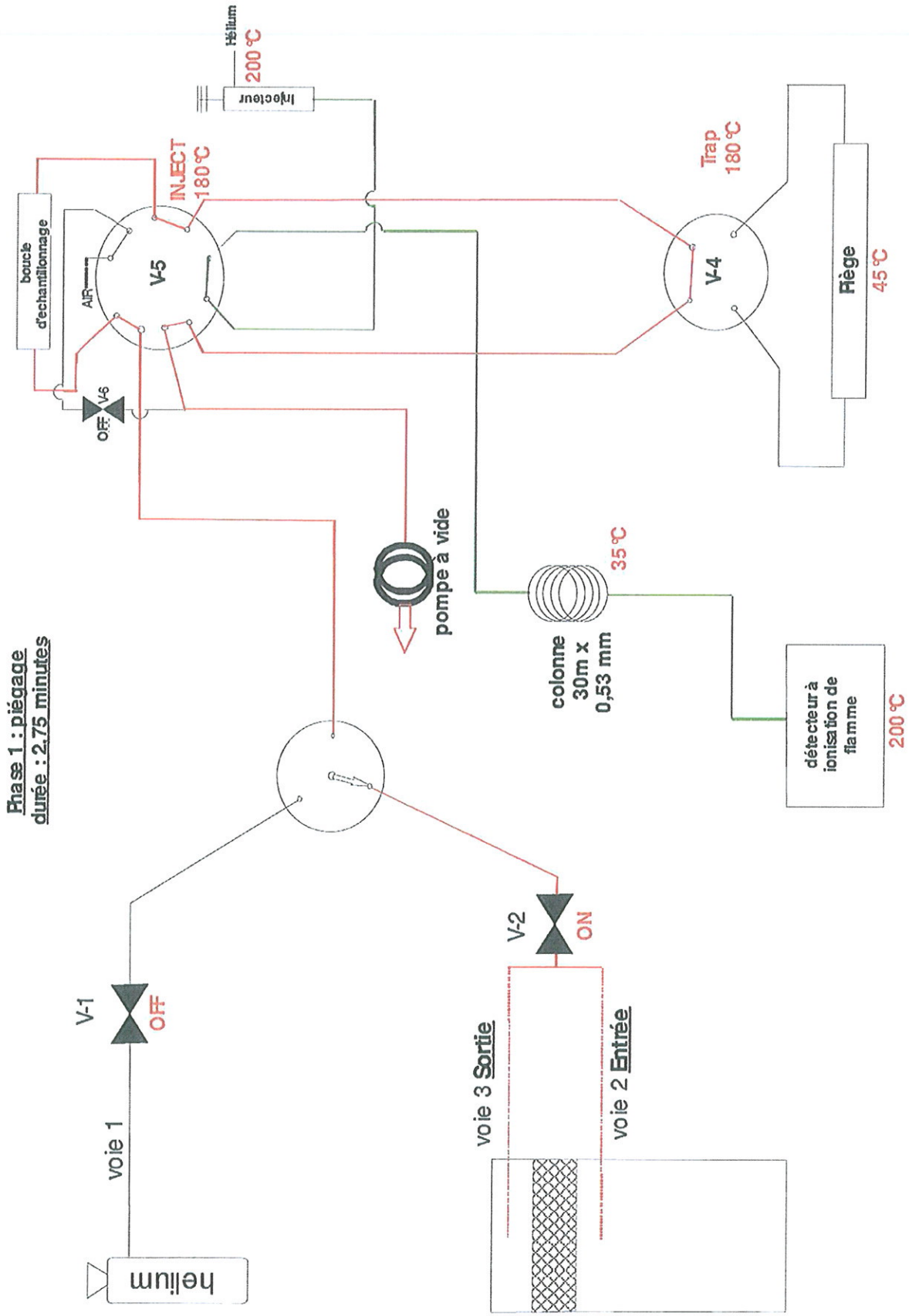
⇩

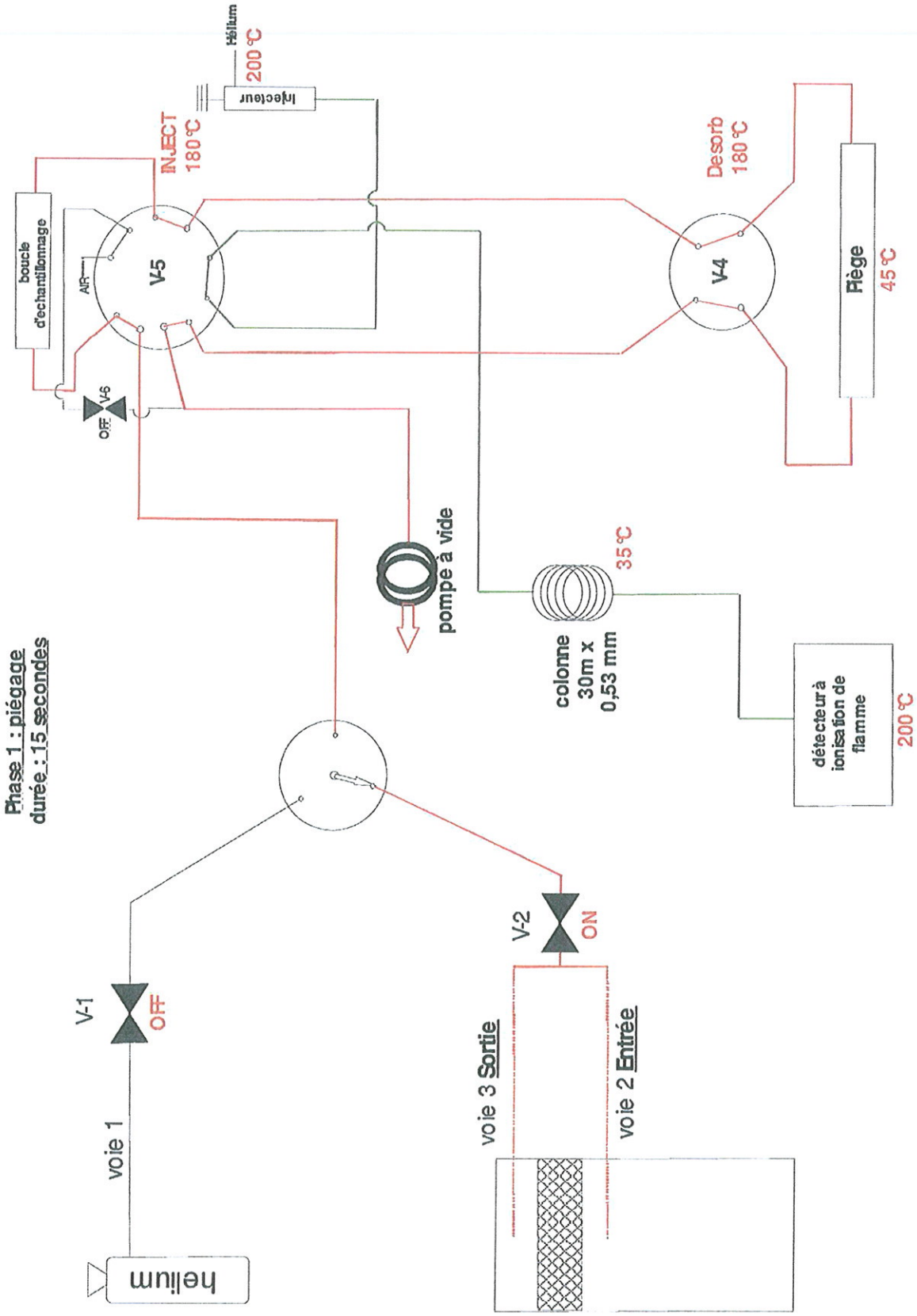
8- Start the Varian Star acquisition software

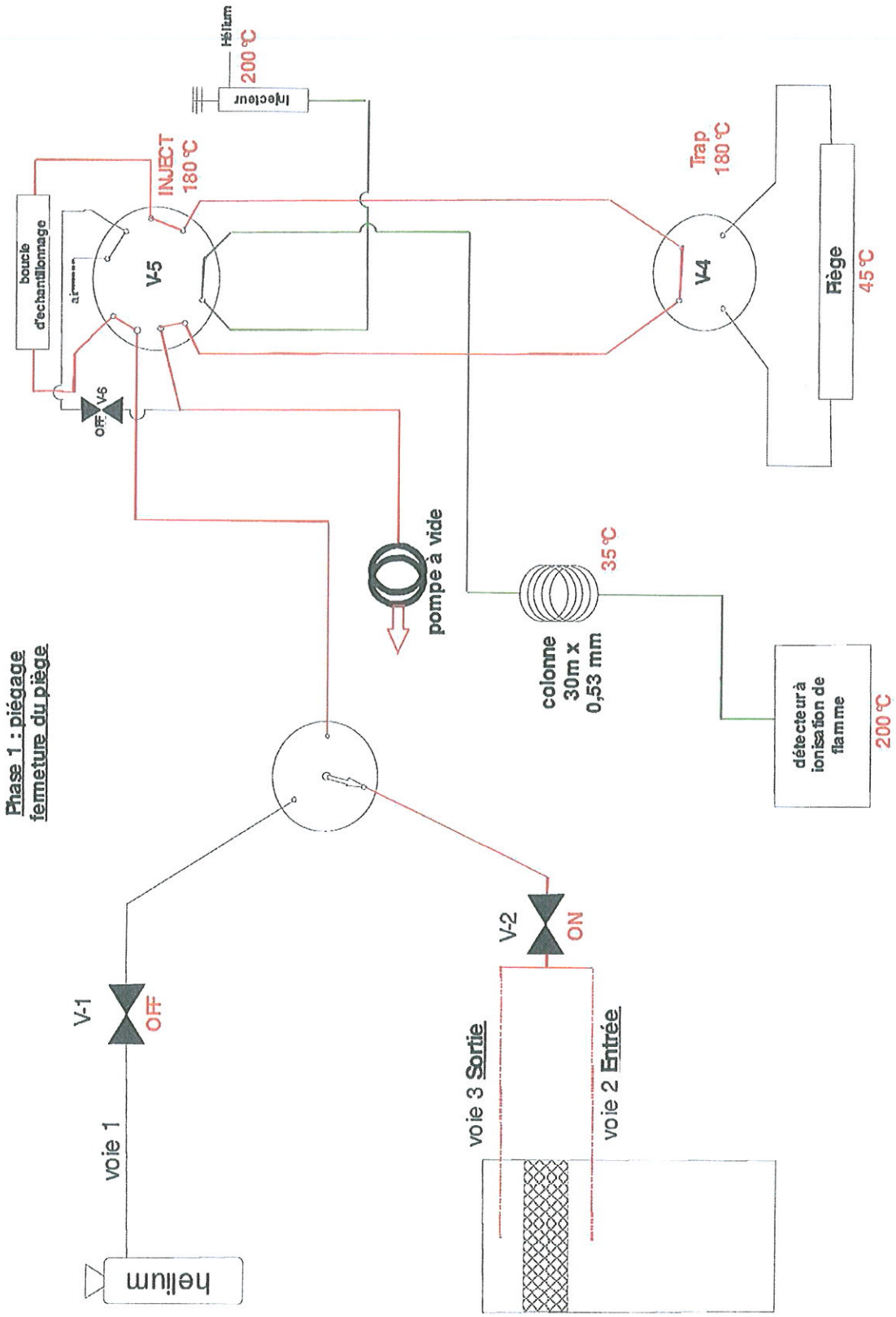
⇩

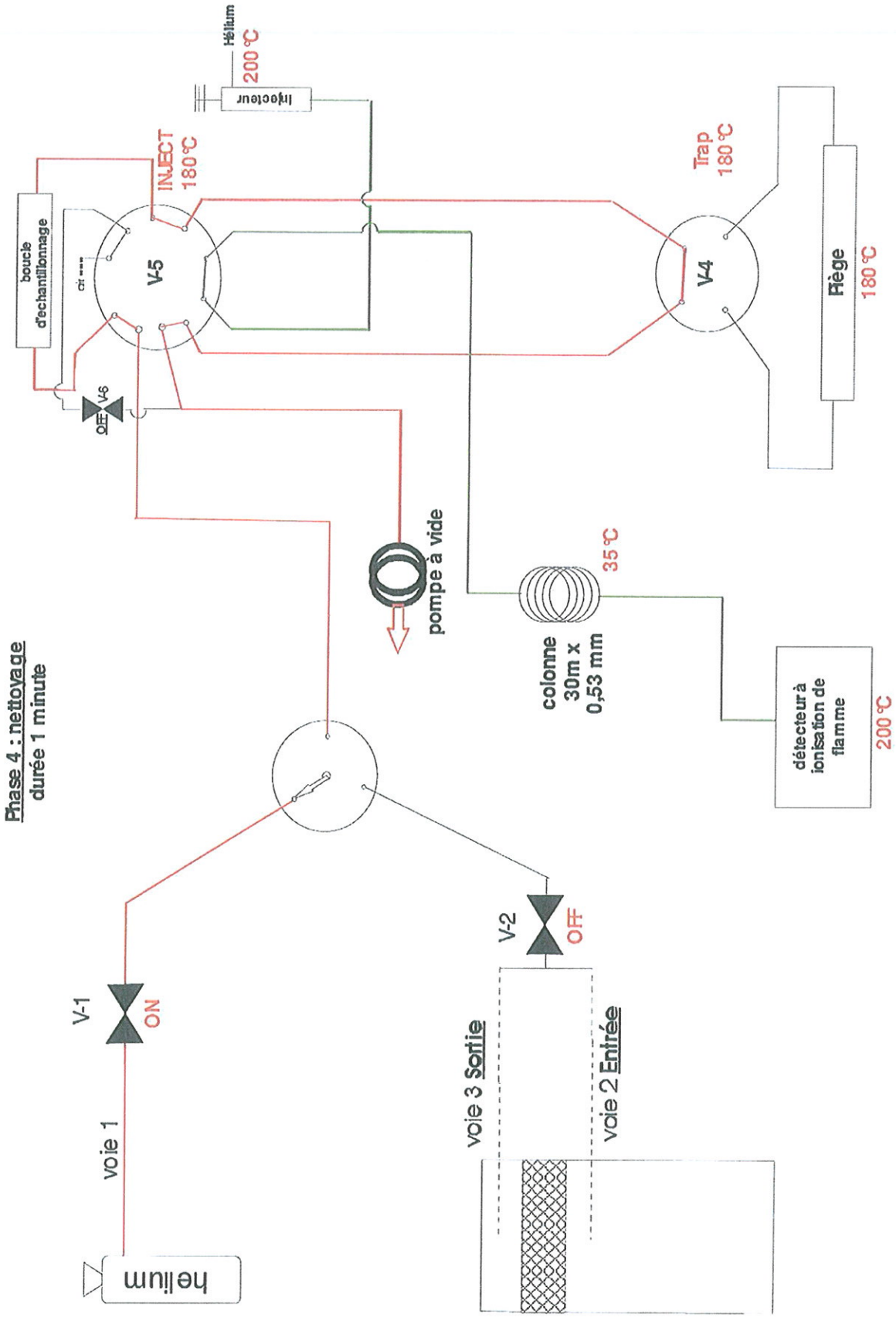
9 – Stop the test after eight hours of evaporation

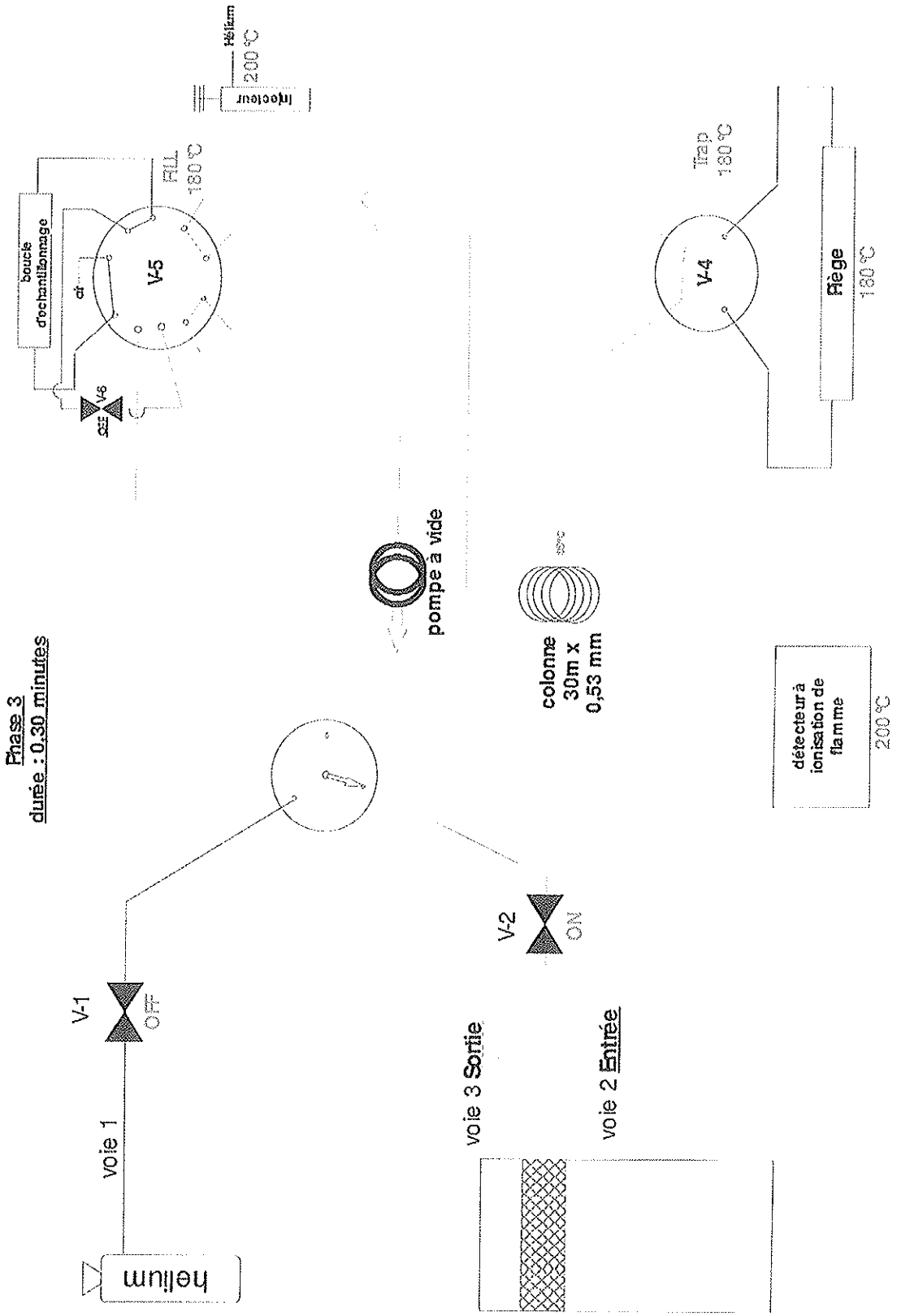


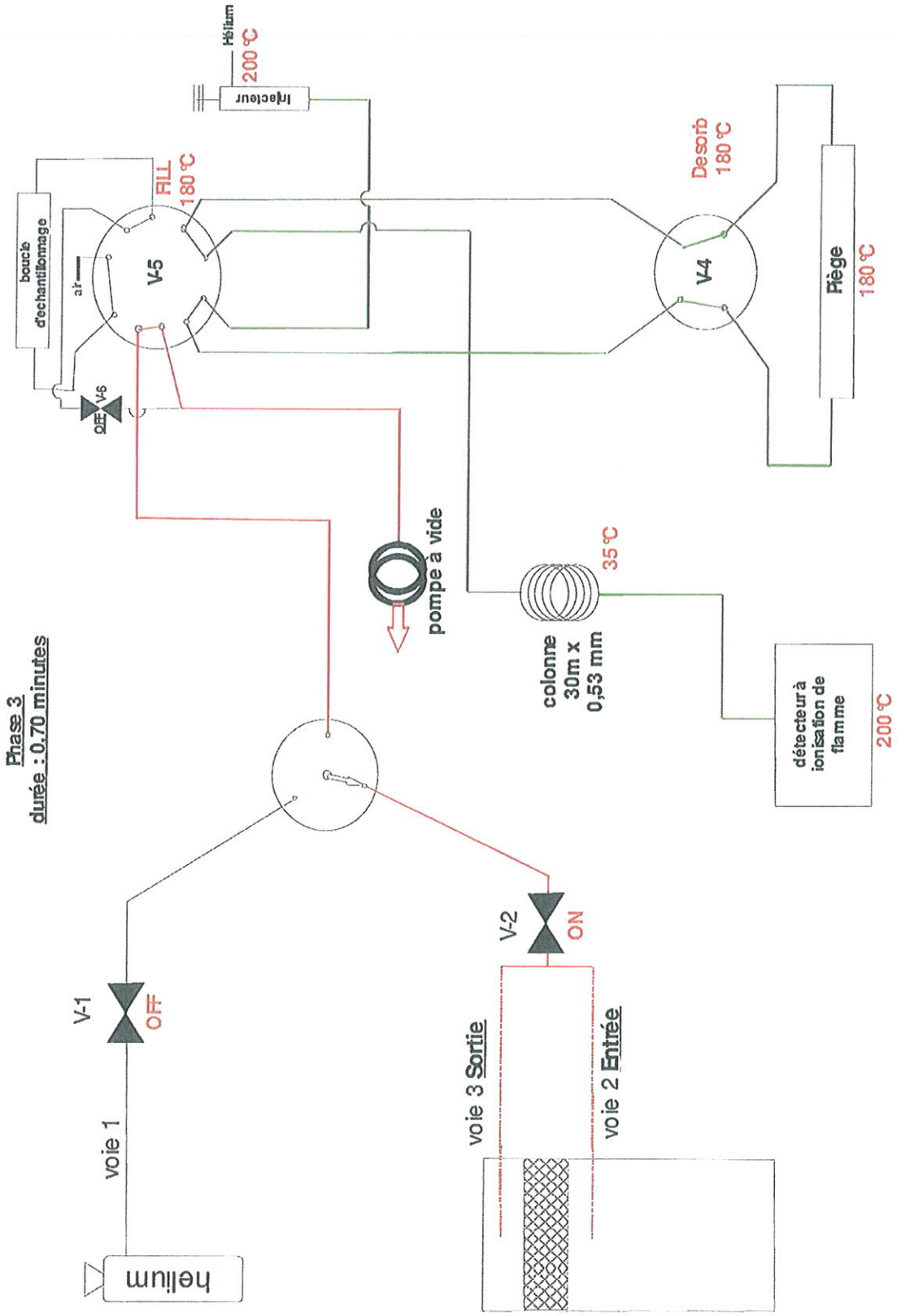


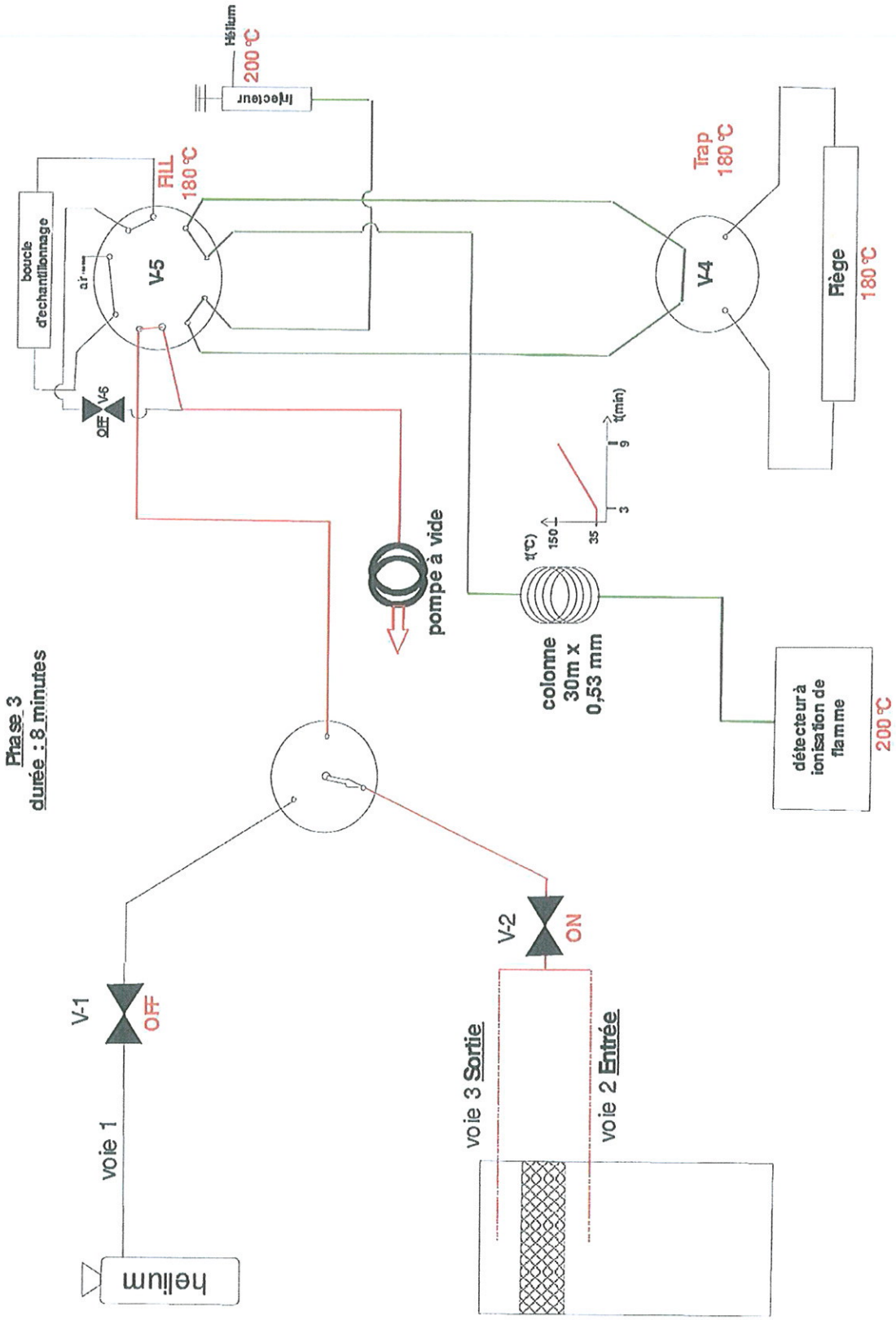


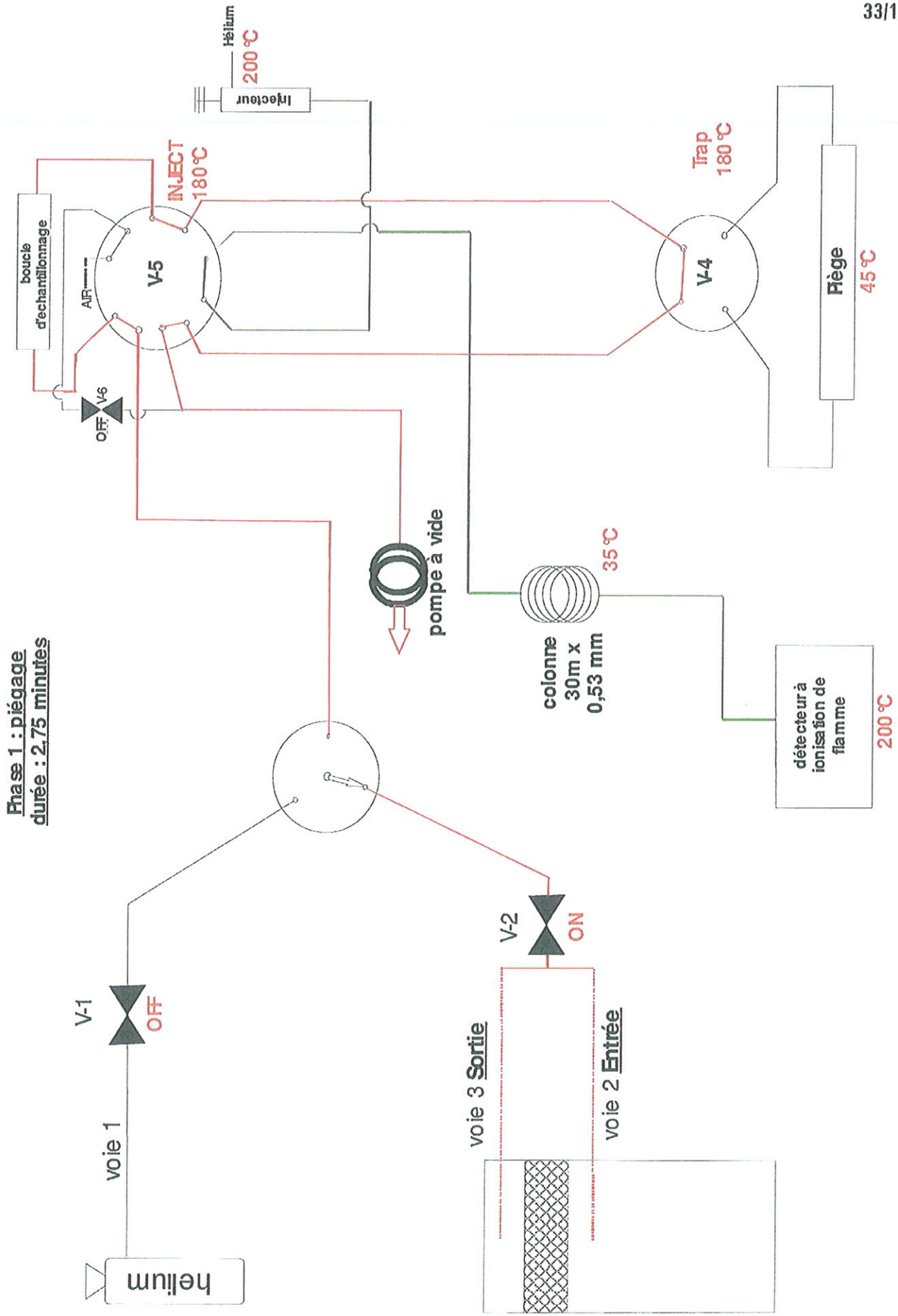












MEASUREMENT EQUIPMENTS

For the air face velocity

- **Anemometer**
  Model VELOCICALC 8386-AMF (S/N 02010104).
  Supplyer : TSI Incorporated (Shoreview MN – USA).
  See calibration certificate attached.

For the mass of evaporated chemical agent

- **Laboratory balance**
  Model PRECISA XB 6200D (S/N 71493).
  Supplyer : Mettler-Toledo International Incorporated (Columbus OHIO – USA).
  See internal calibration curve attached.

- **Set of precision weights (up to 200 g)**
  Model XPCME2 (S/N S99 0935).
  Supplyer : Zwiebel (Saverne – France).
  See calibration certificate attached.

- **Set of precision weights (1000 and 2000 g)**
  Model XPCOF1 (S/N S99 0940).
  Supplyer : Zwiebel (Saverne – France).
  See calibration certificate attached.

For the temperature and relative humidity measurements

- **Multimeters**
  Model 175-H2 (S/N 38215624/804 and 38215782/804).
  Supplyer : TESTO (Forbach – France).
  See calibration certificate attached.

CALIBRATION CERTIFICATES

See attached documents.

R-NFX170510 PMa/PMa

ERLAB

19, rue des Mesliers
Z.I. Sud-Est
35510 Cesson-Sévigné - France

Tél. +33 (0)2 99 22 81 22
Fax +33 (0)2 99 41 71 70
www.intertek.com

Cesson-Sévigné,
le 20 octobre 2009

N°/ M09101902

CONSTAT

DE VERIFICATION

VELOCICALC 8386-A-MF
N° de série : 02010104

Effectué par Monsieur Michel MARECHAL de la Société :

INTERTEK-C.T.M.A.
19, Rue des Mesliers
Z.I. Sud-Est
35510 CESSON-SEVIGNE
FRANCE

Pour le compte de la Société :

ERLAB
Parc d'affaires des Portes
B.P. 403
27104 VAL DE REUIL

Intertek Testing Services (France) S.a.r.l. - 91, rue du Général de Gaulle - 27100 Le Vaudreuil - France - Tél. +33 (0)2 32 09 36 26 - Fax +33 (0)2 32 09 36 28
S.A.R.L. au capital de : 136 000 Euros - 302 607 486 RCS Evreux - Siret 302 607 486 00156

[redacted]

Intertek

N°/ M09101902

VERIFICATION DE CENTRALE DE MESURES TSI

1 : DISPOSITIFS UTILISES

- Générateur C1 et hygromètre M4 General Eastern :

Générateur d'hygrométrie C1, numéro de série 0981199, marque General Eastern. Ce système permet une génération d'hygrométrie de 10% à 99%. Il est asservi par l'hygromètre M4 à miroir refroidi, numéro de série 2331199, étalonné par le CETIAT en avril 2009. L'ensemble permet de vérifier les sondes d'hygrométrie avec une précision de 0,5%.

- Thermomètre de référence AOIP PHP 602 :

Thermomètre de haute précision, sonde de mesure platine quatre fils AN 5847, gamme de mesure de -180 à +450 °C,. Étalonné en juin 2009 par AOIP., N° de série D0300D405-10-001.

- Etuve MMM Medcenter Friocell 55 :

Etuve FRIOCELL 55, numéro de série 000921/10000, permettant l'étalonnage des sondes de température par méthode de comparaison avec le thermomètre PHP 602. Température de 0°C à 100°C, homogénéité 0,1%, résolution 0,1°C.

- Calibrateur de surpression In'trad KAL 84 :

Calibrateur de surpression équipé d'une membrane en bronze de béryllium, affichage sur quatre digits et demi, linéarité : 0,2%. Ce calibrateur intègre également la chambre de surpression qui permet d'imposer une pression de calibrage quelconque comprise entre 0 et 100mbar. Appareil numéro de série 120991020297 étalonné en mai 2009 par TRESCAL.

- Tunnel d'air TSI 8390 :

Tunnel d'air TSI 8390, numéro d'identification CTM076. Ce tunnel permet de générer un flux d'air constant et laminaire jusqu'à 40m/s, permettant ainsi l'étalonnage des anémomètres, identification CTM076.

- Transducteur de pression MKS-BARATRON 220D et afficheur TSI 8495 :

Ce transducteur de pression, ainsi que son afficheur associé, permettent la mesure de vitesse du tunnel d'air TSI 8390. Le transducteur MKS-BARATRON 220D porte le numéro de série 000551203, et l'afficheur TSI 8495 le numéro 1160. Ce système a été étalonné par le LNE en mai 2009.

Intertek

N°/ M09101902

VERIFICATION DE CENTRALE DE MESURE TSI :

2 : VERIFICATION A RECEPTION DE L'EQUIPEMENT

a) Environnement :

- Température ambiante : 22,1 °C
- Humidité relative ambiante : 33 %

b) Tests généraux :

- Afficheurs LCD : Conforme
- Clavier : Conforme
- Connecteurs : /
- Prolongateurs : /
- Pile : 4,816 Volts
- Boitier : Conforme
- Aspect extérieur : Conforme

c) Temps de mise en chauffe : min.

d) Température :

Offset température: +0,2
- Point 1 : 15,3 °C pour 15,01 °C - Point 3 : 25,3 °C pour 25,07 °C
- Point 2 : 20,3 °C pour 20,08 °C - Point 4 : 30,4 °C pour 30,11 °C

e) Hygrométrie :

Offset hygrométrie: 0,0
- Point 1 : 30,3 % pour 30,1 % - Point 3 : 48,3 % pour 50,1 %
- Point 2 : 39,4 % pour 40,1 % - Point 4 : 57,8 % pour 60,0 %

f) Vitesse d'air :

Offset vitesse: -5,4
- Point 1 : 0,14 (0,151 m/sec) - Point 3 : 0,99 (1,008 m/sec)
- Point 2 : 0,50 (0,505 m/sec) - Point 4 : 1,34 (1,399 m/sec)

g) Pression :

Offset pression: 0,0
- Point 1 : -1222 pa pour -1,200 Kpa ; Point 5 : 52 pa pour 0,050 Kpa
- Point 2 : -507 pa pour -0,502 Kpa ; Point 6 : 511 pa pour 0,505 Kpa
- Point 3 : -203 pa pour -0,202 Kpa ; Point 7: 1008 pa pour 0,999 Kpa
- Point 4 : -51 pa pour -0,051 Kpa ; Point 8 : 2012 pa pour 1,999 Kpa

h) Interprétation des résultats :

☐ Appareil conforme ■ Appareil hors conformité ☐ Appareil en panne

Remarques : Non conforme en vitesse d'air au point 1,4m/s et en pression aux points -1200, +50 et +500 Pa, limite en température.

QC 5

Intertek

N°/ M09101902

VERIFICATION DE CENTRALE DE MESURE TSI :

3 : VERIFICATION APRES INTERVENTION DU CTMA

a) Environnement :

- Température ambiante : 22,1 °C
- Humidité relative ambiante : 33 %

b) Tests généraux :

- Afficheurs LCD : Conforme
- Clavier : Conforme
- Connecteurs : /
- Prolongateurs : /
- Pile : 6,003 Volts
- Boîtier : Conforme
- Aspect extérieur : Conforme

c) Temps de mise en chauffe : min.

d) Température :

Offset température: 0,0
- Point 1 : 15,0 °C pour 15,07 °C - Point 3 : 25,4 °C pour 25,20 °C
- Point 2 : 20,1 °C pour 20,04 °C - Point 4 : 30,3 °C pour 30,23 °C

e) Hygrométrie :

Offset hygrométrie: 0,0
- Point 1 : 30,3 % pour 30,1 % - Point 3 : 48,3 % pour 50,1 %
- Point 2 : 39,4 % pour 40,1 % - Point 4 : 57,8 % pour 60,0 %

f) Vitesse d'air :

Offset vitesse: -2,0
- Point 1 : 0,15 (0,153 m/sec) - Point 3 : 1,00 (1,003 m/sec)
- Point 2 : 0,50 (0,501 m/sec) - Point 4 : 1,38 (1,402 m/sec)

g) Pression :

Offset pression: -1,5
- Point 1 : -1208 pa pour -1,201 Kpa ; Point 5 : 50 pa pour 0,050 Kpa
- Point 2 : -500 pa pour -0,502 Kpa ; Point 6 : 499 pa pour 0,501 Kpa
- Point 3 : -200 pa pour -0,200 Kpa ; Point 7: 999 pa pour 0,998 Kpa
- Point 4 : -51 pa pour -0,051 Kpa ; Point 8 : 1980 pa pour 1,998 Kpa

h) Interprétation des résultats :

■ Appareil conforme ☐ Appareil hors conformité ☐ Appareil en panne

Remarques : Réglage en température, vitesse d'air et pression différentielle

QC 6

29171

N°/ M09101902

VERIFICATION DE CENTRALE DE MESURE TSI :

Cet instrument a été vérifié conformément aux spécifications et instructions précisées par le fabricant TSI USA. Tous les dispositifs de mesure sont vérifiés/étalonnés par des organismes accrédités COFRAC ou équivalent Européen.

Numéros des documents de travail : IN 4.4-13/A, IN 4.4-14/A, IN 4.4-15/A, IN 4.4-16/A

Annexes des appareils utilisés : N S C X

Le présent constat de vérification ne concerne que l'appareil référencé ci-dessous.

4 : INSTRUMENT

Arrivé le : 8 octobre 2009

Modèle de l'Instrument : VELOCICALC 8386-A-MF

Numéro de série : 02010104

5 : SITE D'IMPLANTATION DE L'INSTRUMENT

Intitulé : ERLAB

Service : /

Adresse : Parc d'affaires des Portes - B.P. 403 - 27104 VAL DE REUIL

Fait à : CESSON SÉVIGNÉ (35)

Le : 19 octobre 2009-

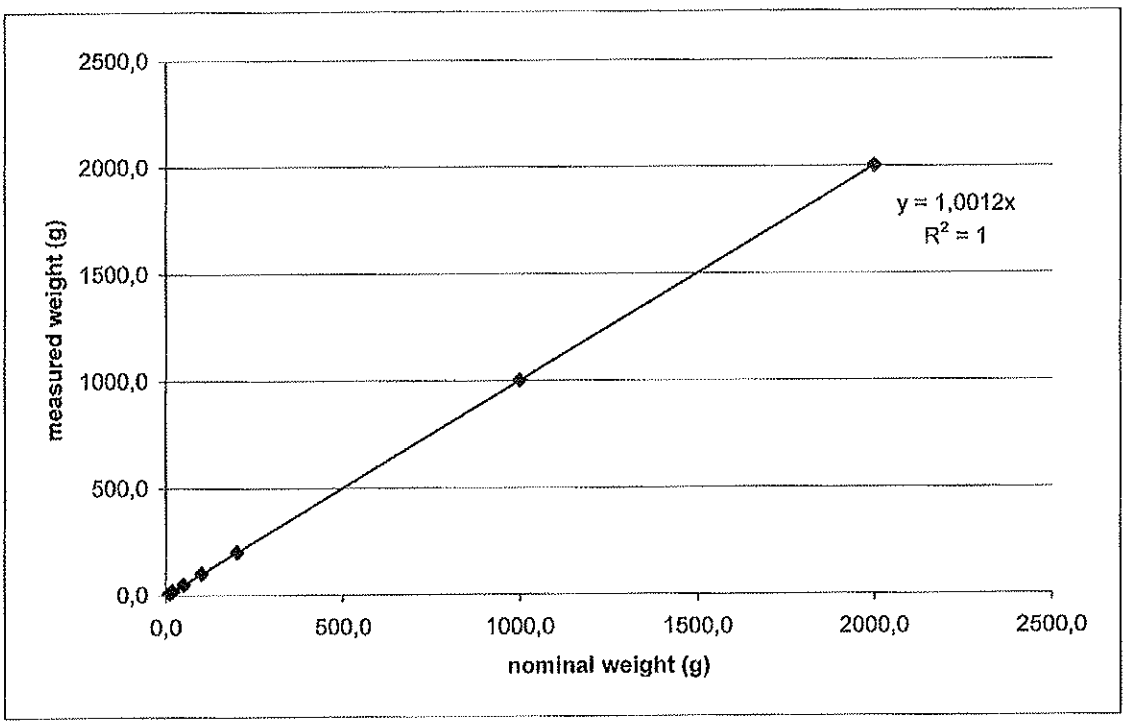
Prochaine vérification le : 19 octobre 2010

QC 5

Michel MARECHAL
Technicien SAV-Métrologie

Laboratory balance PRECISA
Calibration curve

nominal weight (g)	measured weight (g)
10,0	10,0
20,0	20,0
50,0	50,1
100,0	100,1
200,0	200,2
1000,0	1001,2
2000,0	2002,5



0035

CHAÎNE D'ÉTALONNAGE 42/171
CALIBRATION SERVICE
MASSE
MASS
ACCREDITATION N° 2.1218
ACCREDITATION NO. 2.1218

ZWIEBEL
V 7.02/1-2CV

SERVICE DE MÉTROLOGIE
METROLOGY DEPARTMENT
BP 50002 - F67701 SAVERNE CEDEX
☎ + 33 (0)3 88 71 53 10
🖷 + 33 (0)3 88 71 20 92
commercial@zwiebel.fr
www.zwiebel.fr
Cde : 20803097

CERTIFICAT D'ÉTALONNAGE

CALIBRATION CERTIFICATE

N° Z08 04839

DÉLIVRÉ A
ISSUED TO

INTERTEK LABTEST
LABORATOIRE TEXTILE
4 rue du pont vert
Mlle Axelle PRESSE
27100 LE VAUDREUIL
FRANCE

INSTRUMENT ÉTALONNÉ
CALIBRATED INSTRUMENT

Désignation **Série de poids**
Designation *Set of weights*

Constructeur **ZWIEBEL**
Manufacter

Type **XPCME2**
Type

N° de série **S99 0935**
Serial number

N° d'identification *I*
Identification number

Ce certificat comprend 3 pages
This certificate consists of 3 pages

Date d'émission **28/05/2008**
Date of issue

LE RESPONSABLE DU SERVICE
THE HEAD OF DEPARTMENT

J. ESCORIZA

cofrac
ETALONNAGE

ERLAB

Certificat d'étalonnage N° **Z08 04839**
Calibration certificate no.

DESCRIPTION
DESCRIPTION

Caractéristiques *Characteristics*	Cylindre monobloc avec gorge de préhension *Cylinder solid with gripping groove*
Quantité *Quantity*	6
Matière *Material*	Acier Inoxydable *Stainless steel*
Finition *Finish*	Polissage *Polished*
Conditionnement *Packing*	Coffret bois comportant le numéro de série S99 0935 *Wooden box showing the serial number S99 0935*

MODE OPÉRATOIRE
OPERATING METHOD

Les masses ont été étalonnées par comparaison (Méthode de BORDA) aux masses étalons de travail.
The masses were calibrated by comparison (BORDA Method) with working standard weights.

RÉSULTATS
RESULTS

Les résultats des mesures sont donnés en valeur conventionnelle.
The results of the measurements are given as conventional value.

La valeur conventionnelle est définie dans la Recommandation Internationale D28 de l'OIML :
The conventional value is defined by International Recommendation D28 (OIML):

" La valeur conventionnelle d'un poids est égale à la masse totale des poids de référence réalisés dans une matière de masse volumique de 8000 kg/m³, qui équilibre la masse de ce poids, dans l'air de masse volumique 1,2 kg/m³, l'opération étant effectuée à 20 °C. "

" The conventional value of a weight is equal to the total mass of the reference weights produced in a material having a density of 8000 kg/m³, which balances that eight, in air having a density of 1,2 kg/m³, the operation being performed at 20 °C. "

Les résultats des mesures ont été corrigés, si nécessaire, pour les ramener aux conditions de référence définies ci-dessus.Les incertitudes élargies mentionnées sont celles correspondant à deux fois l'incertitude-type composée. Les incertitudes-types ont été calculées en tenant compte des différentes composantes d'incertitudes, étalons de référence, moyens d'étalonnage, conditions d'environnement, contribution de l'instrument étalonné, répétabilité.

The results of the measurements were corrected, if necessary, in order to bring them to the reference conditions indicate above.The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k = 2. The standard uncertainty were calculated in mind the various sources of uncertainty, reference standards,calibration methods, environmental conditions, contribution of the instrument being calibrated, and repeatability.

La délivrance d'un certificat d'étalonnage portant le logotype Cofrac - Etalonnage garantit le raccordement des résultats d'étalonnage au système international d'unités (SI).

The issue of a calibration certificate carrying the Cofrac - Etalonnage logo guarantees that the results of calibration can be traced to national standards, which realize the units of measurement according to the International System of Units (SI).

La traduction de ce document est une traduction littérale. En cas de doute, seule la version Française devra être utilisée.

The English version of the calibration certificate is not a binding translation. If any matter gives rise to controversy, the French original text must be used.

Certificat d'étalonnage N° **Z08 04839**
Calibration certificate no.

RÉSULTATS D'ÉTALONNAGE
RESULTS OF CALIBRATION

Masse nominale Nominal mass	Marquage Marking	Masse conventionnelle Conventional mass	Incertitude en ± Uncertainty in ±	Opérateur(s) Operator(s)
1 g	ZH 521	1,000 011 g	10 µg	JAMIN J.
10 g	ZH 295	10,000 006 g	20 µg	JAMIN J.
20 g	ZH 591	20,000 022 g	25 µg	JAMIN J.
50 g	ZH 620	50,000 028 g	30 µg	JAMIN J.
100 g	ZI 94	100,000 082 g	50 µg	JAMIN J.
200 g	ZI 59	200,000 05 g	100 µg	JAMIN J.

Étalonnage du 26/05/2008 au 27/05/2008 OK AP 29/05/08
Calibration from *to*

Renseignements complémentaires
Complementary information
/

ZWIEBEL
V 7.02/1-2CV
SERVICE DE MÉTROLOGIE
METROLOGY DEPARTMENT
BP 50002 - F67701 SAVERNE CEDEX
☎ + 33 (0)3 88 71 53 10
🖷 + 33 (0)3 88 71 20 92
commercial@zwiebel.fr
www.zwiebel.fr
Cde : 20903961

CHAÎNE D'ÉTALONNAGE 45/171
CALIBRATION SERVICE
MASSE
MASS
ACCRÉDITATION N° 2.1218
ACCREDITATION NO. 2.1218

CERTIFICAT D'ÉTALONNAGE

CALIBRATION CERTIFICATE

N° Z09 06467

DÉLIVRÉ A
ISSUED TO

INTERTEK LABTEST
LABORATOIRE TEXTILE
4 rue du pont vert
Mlle Axelle PRESSE
27100 LE VAUDREUIL
FRANCE

INSTRUMENT ÉTALONNÉ
CALIBRATED INSTRUMENT

Désignation **Série de poids**
Designation *Set of weights*

Constructeur **ZWIEBEL**
Manufacter

Type **XPCOF1**
Type

N° de série **S99 0940**
Serial number
N° d'identification /
Identification number

Ce certificat comprend 3 pages
This certificate consists of 3 pages

Date d'émission **08/07/2009**
Date of Issue

LE RESPONSABLE DU SERVICE
THE HEAD OF DEPARTMENT

J. ESCORIZA

cofrac
ETALONNAGE

Certificat d'étalonnage N° **Z09 06467**
Calibration certificate no.

DESCRIPTION
DESCRIPTION

Caractéristiques *Characteristics*	Cylindre avec gorge de préhension Poids <= 20g : monoblocs Poids >= 50g : avec cavité d'ajustage *Cylinder with gripping groove* *Weights <= 20g : solid* *Weights >= 50g : with an adjustment cavity*
Quantité *Quantity*	2
Matière *Material*	Acier inoxydable *Stainless steel*
Finition *Finish*	Polissage *Polished*
Conditionnement *Packing*	Valise comportant le numéro de série S99 0940 *Suitcase showing the serial number S99 0940*

MODE OPÉRATOIRE
OPERATING METHOD

Les masses ont été étalonnées par comparaison (Méthode de BORDA) aux masses étalons de travail.
The masses were calibrated by comparison (BORDA Method) with working standard weights.

RÉSULTATS
RESULTS

Les résultats des mesures sont donnés en valeur conventionnelle.
The results of the measurements are given as conventional value.

La valeur conventionnelle est définie dans la Recommandation Internationale D28 de l'OIML :
The conventional value is defined by International Recommendation D28 (OIML):

" La valeur conventionnelle d'un poids est égale à la masse totale des poids de référence réalisés dans une matière de masse volumique de 8000 kg/m³, qui équilibre la masse de ce poids, dans l'air de masse volumique 1,2 kg/m³, l'opération étant effectuée à 20 °C. "

" The conventional value of a weight is equal to the total mass of the reference weights produced in a material having a density of 8000 kg/m³, which balances that eight, in air having a density of 1,2 kg/m³, the operation being performed at 20 °C. "

Les résultats des mesures ont été corrigés, si nécessaire, pour les ramener aux conditions de référence définies ci-dessus.Les incertitudes élargies mentionnées sont celles correspondant à deux fois l'incertitude-type composée. Les incertitudes-types ont été calculées en tenant compte des différentes composantes d'incertitudes, étalons de référence, moyens d'étalonnage, conditions d'environnement, contribution de l'instrument étalonné, répétabilité.

The results of the measurements were corrected, if necessary, in order to bring them to the reference conditions indicate above.The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k = 2. The standard uncertainty were calculated in mind the various sources of uncertainty, reference standards,calibration methods, environmental conditions, contribution of the instrument being calibrated, and repeatability.

La délivrance d'un certificat d'étalonnage portant le logotype Cofrac - Etalonnage garantit le raccordement des résultats d'étalonnage au système international d'unités (SI).

The issue of a calibration certificate carrying the Cofrac - Etalonnage logo guarantees that the results of calibration can be traced to national standards, which realize the units of measurement according to the International System of Units (SI).

La traduction de ce document est une traduction littérale. En cas de doute, seule la version Française devra être utilisée.

The English version of the calibration certificate is not a binding translation. If any matter gives rise to controversy, the French original text must be used.

Certificat d'étalonnage N° **Z09 06467**
Calibration certificate no.

RÉSULTATS D'ÉTALONNAGE
RESULTS OF CALIBRATION

Masse nominale Nominal mass	Marquage Marking	Masse conventionnelle Conventional mass	Incertitude en ± Uncertainty in ±	Opérateur(s) Operator(s)
1 kg	ZI 51	1,000 001 3 kg	1,5 mg	WURMSER B.
2 kg	ZI 59	2,000 000 7 kg	3 mg	WURMSER B.

Étalonnage du 07/07/2009
Calibration from

Renseignements complémentaires
Complementary information
/

OK - AP

Kalibrier-Protokoll

Certificate of conformity • Protocole d'étalonnage
Protocollo di collaudo • Informe de calibración

R-NFX17051 Rev.01a

Gerät / Module type / Modèle / Modelo:	**Testo 175-H2**
Serien-Nr. / Serial no. / No.de série / Número de serie:	**38215782**
Schnittstellentest / Interface test / Test d'interface / Prueba del interface:	**ok**
Anzeigen-Test / Display-Test / Test afficheur / Prueba del visualizador:	**ok**
LED-Funktion / LED-functions / Fonctions LED / Funciones del LED:	**ok**
Tasten-Start / Key-Start / Départ clavier / Tecla de inicio:	**ok**
Grenzwerte gesetzt / Limit values set / Valeur limite fixée / Ajuste valores límite:	**ok**

Messwerte mit Sensoren / Measured values with sensors /
Valeurs mesurées avec capteurs / Valores medidos con sensors:

Sollwert Reference Référence Referencia	Zulässige Toleranz Permissible tolerance Tolérance admise Tolerancia permitida	Istwert Actual Value Valeur réelle Valor medido
13.3 %rF	±3.0 %rF	13.3 %rF
43.2 %rF	±3.0 %rF	43.6 %rF
72.7 %rF	±3.0 %rF	72.4 %rF
25.2 °C	±0.5 °C	25.3 °C

Prüfer / Inspector /
Vérificateur / Verificador J. Yeung

ERLAB

testo

Kalibrier-Protokoll

Certificate of conformity • Protocole d'étalonnage
Protocollo di collaudo • Informe de calibración

Gerät / Module type /
Modèle / Modelo: **Testo 175-H2**

Serien-Nr. / Serial no. /
No. de série / Número de serie: **38215624**

Schnittstellentest / Interface test /
Test d'interface / Prueba del interface: **ok**

Anzeigen-Test / Display-Test /
Test afficheur / Prueba del visualizador: **ok**

LED-Funktion / LED-functions /
Functions LED / Funciones del LED: **ok**

Tasten-Start / Key-Start /
Départ clavier / Tecla de inicio: **ok**

Grenzwerte gesetzt / Limit values set /
Valeur limite fixée / Ajuste valores límite: **ok**

Meßwerte mit Sensoren / Measured values with sensors /
Valeurs mesurées avec capteurs / Valores medidos con sensors:

Sollwert Reference Référence Referencia	Zulässige Toleranz Permissible tolerance Tolérance admise Tolerancia permitida	Istwert Actual Value Valeur réelle Valor medido
13.6 %rF	±3.0 %rF	13.7 %rF
43.6 %rF	±3.0 %rF	44.0 %rF
71.7 %rF	±3.0 %rF	71.8 %rF
25.1 °C	±0.5 °C	25.3 °C

Prüfer / Inspector /
Vérificateur / Verificador J. Yeung

CALIBRATION CURVE AND CHROMATOGRAMS

ISOPROPANOL CALIBRATION

See attached documents.

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\31-05-2010 sortie 16;16;27.ru
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

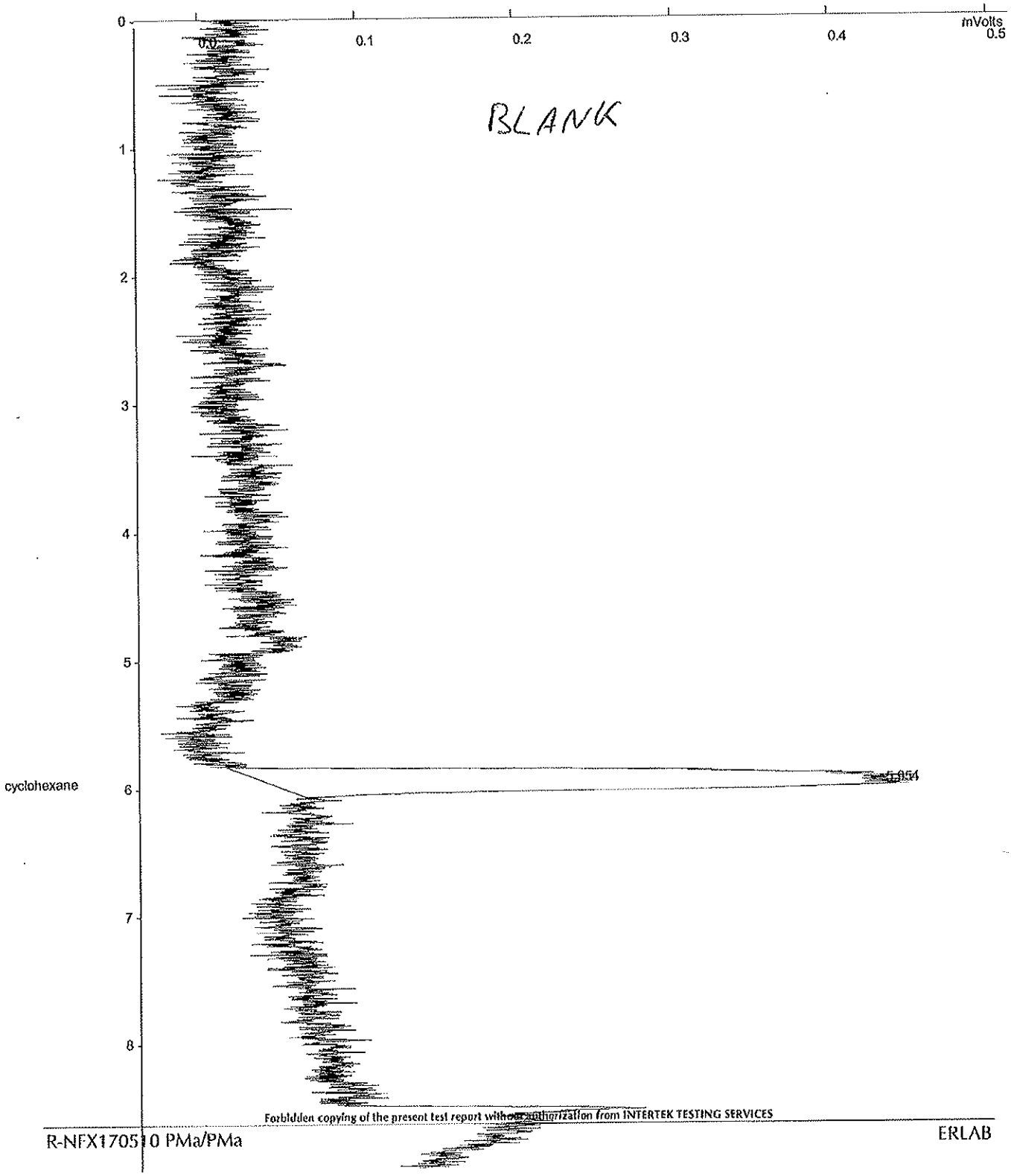
Injection Date: 31/05/2010 16:16 Calculation Date: 31/05/2010 16:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 2 Zero Offset = 8%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



evaporation flow rate (g/min)	concentration (ppm)	GC counts
0,00	0,0	0
1,56	163,4	1068202
2,32	243,0	1724629
0,62	64,9	363757
0,46	48,2	226870
0,68	71,5	370572

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\31-05-2010 sortie 16;16;27.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 31/05/2010 16:16 Calculation Date: 31/05/2010 16:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.954	0.074	3920	BB	10.6	
	Totals:	100.0000		0.074	3920			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 12 microVolts

Noise (used): 73 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\19-05-2010 entree 15;58;43.ri
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : entree

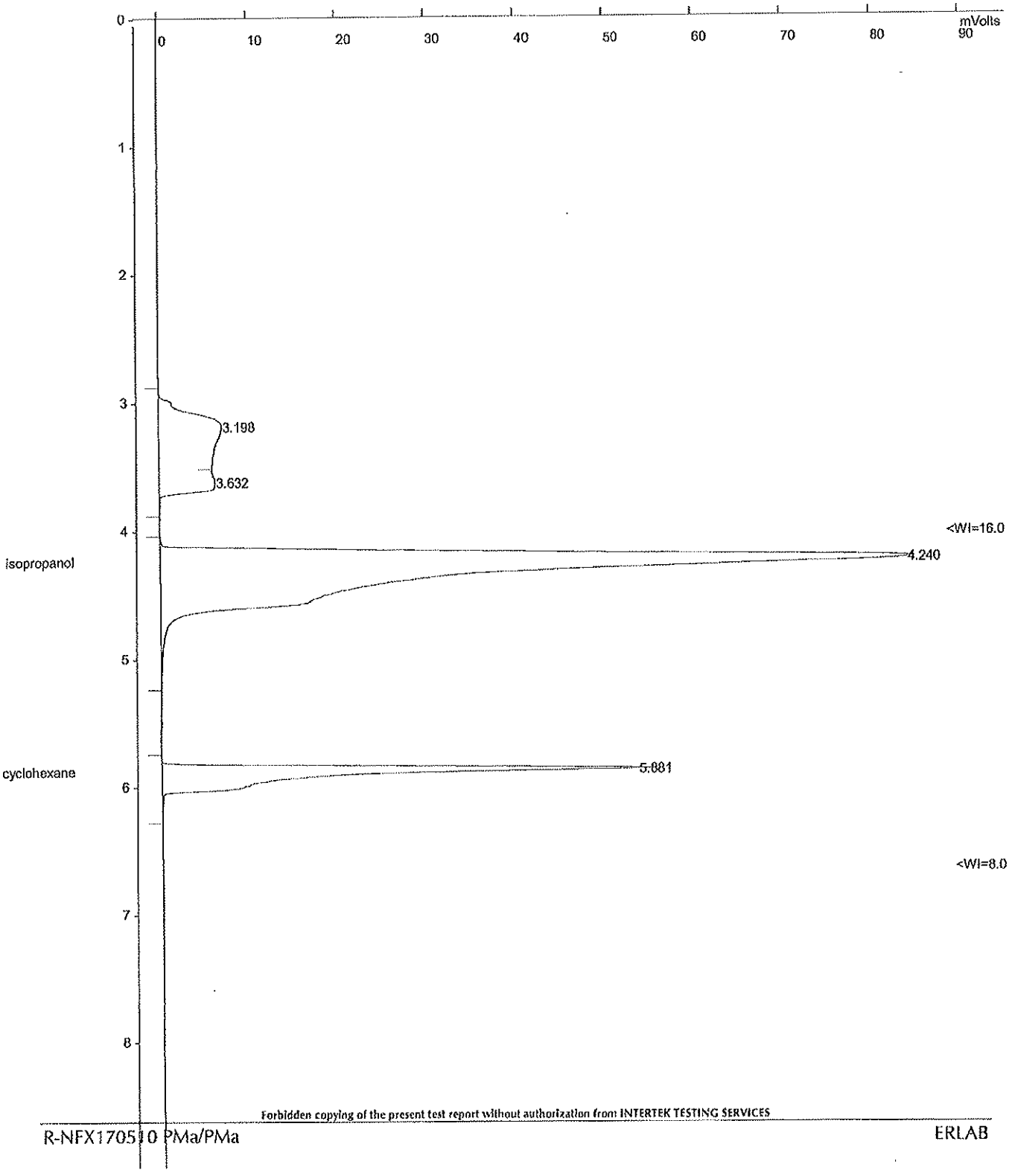
Injection Date: 19/05/2010 15:58 Calculation Date: 19/05/2010 17:11

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 401 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.993 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\19-05-2010 entree 15;58;43.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : entree

Injection Date: 19/05/2010 15:58 Calculation Date: 19/05/2010 17:11

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		11.3577	3.198	0.000	179381	BV	14.2	
2		4.2098	3.632	0.000	66489	VB	13.6	
3	isopropanol	67.6345	4.240	0.010	1068202	BB	8.8	
4	cyclohexane	16.7979	5.881	0.001	265302	BB	3.4	
	Totals:	99.9999		0.011	1579374			

Total Unidentified Counts : 245870 counts

Detected Peaks: 4 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -50 microVolts

Noise (used): 62 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\19-05-2010 entree 16;22;53.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : entree

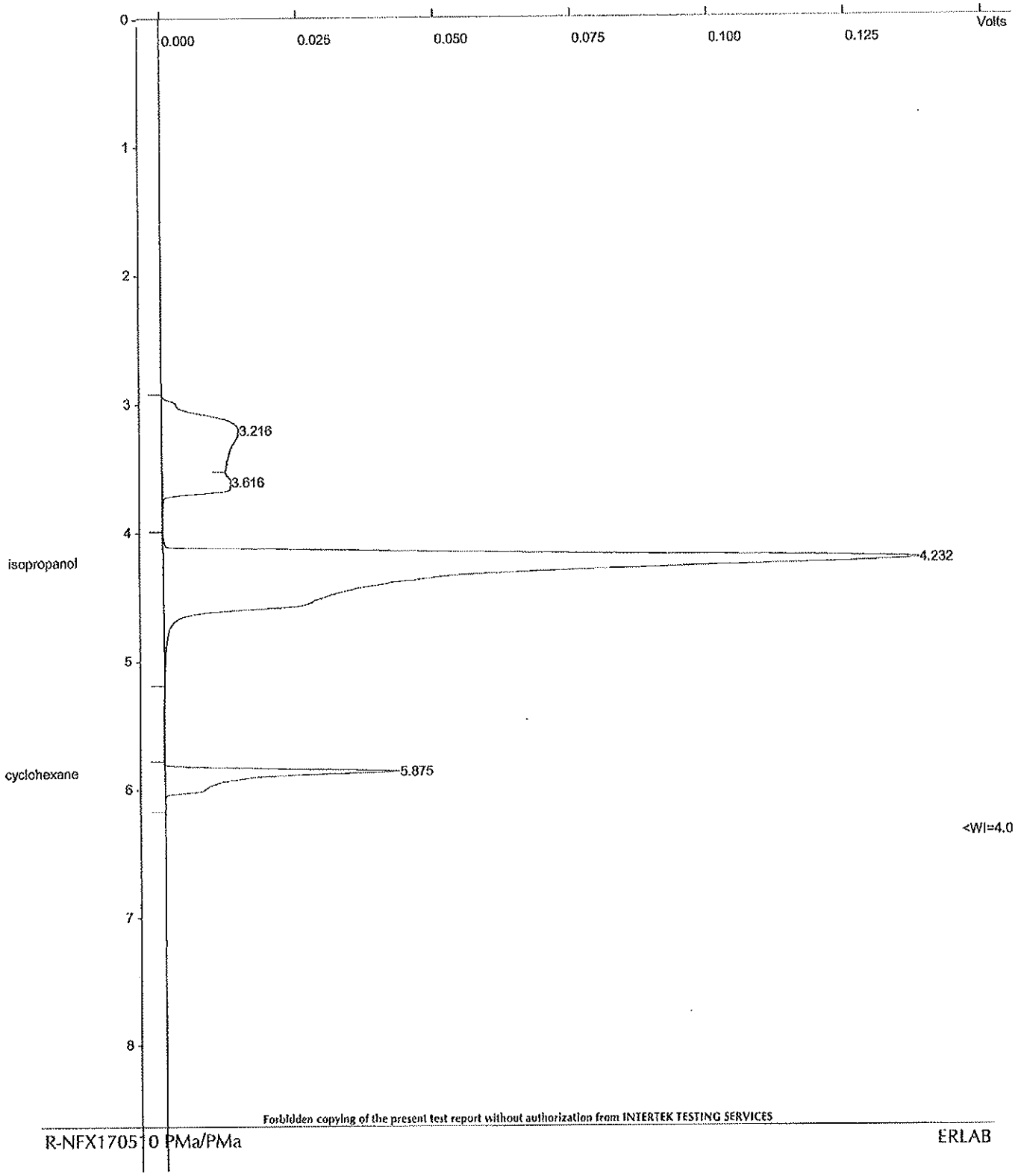
Injection Date: 19/05/2010 16:22 Calculation Date: 19/05/2010 17:11

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 654 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.993 min Min / Tick = 1.00



<WI=4.0

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\19-05-2010 entree 16;22;53.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : entree

Injection Date: 19/05/2010 16:22 Calculation Date: 19/05/2010 17:11

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		14.8281	3.216	0.000	358916	BV	15.9	
2		5.2419	3.616	0.000	126880	VB	11.7	
3	isopropanol	71.2507	4.232	0.002	1724629	BB	8.5	
4	cyclohexane	8.6793	5.875	-0.005	210084	BB	3.3	
	Totals:	100.0000		-0.003	2420509			

Total Unidentified Counts : 485796 counts

Detected Peaks: 4 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -66 microVolts

Noise (used): 63 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\25-05-2010 entree 10;28;03.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

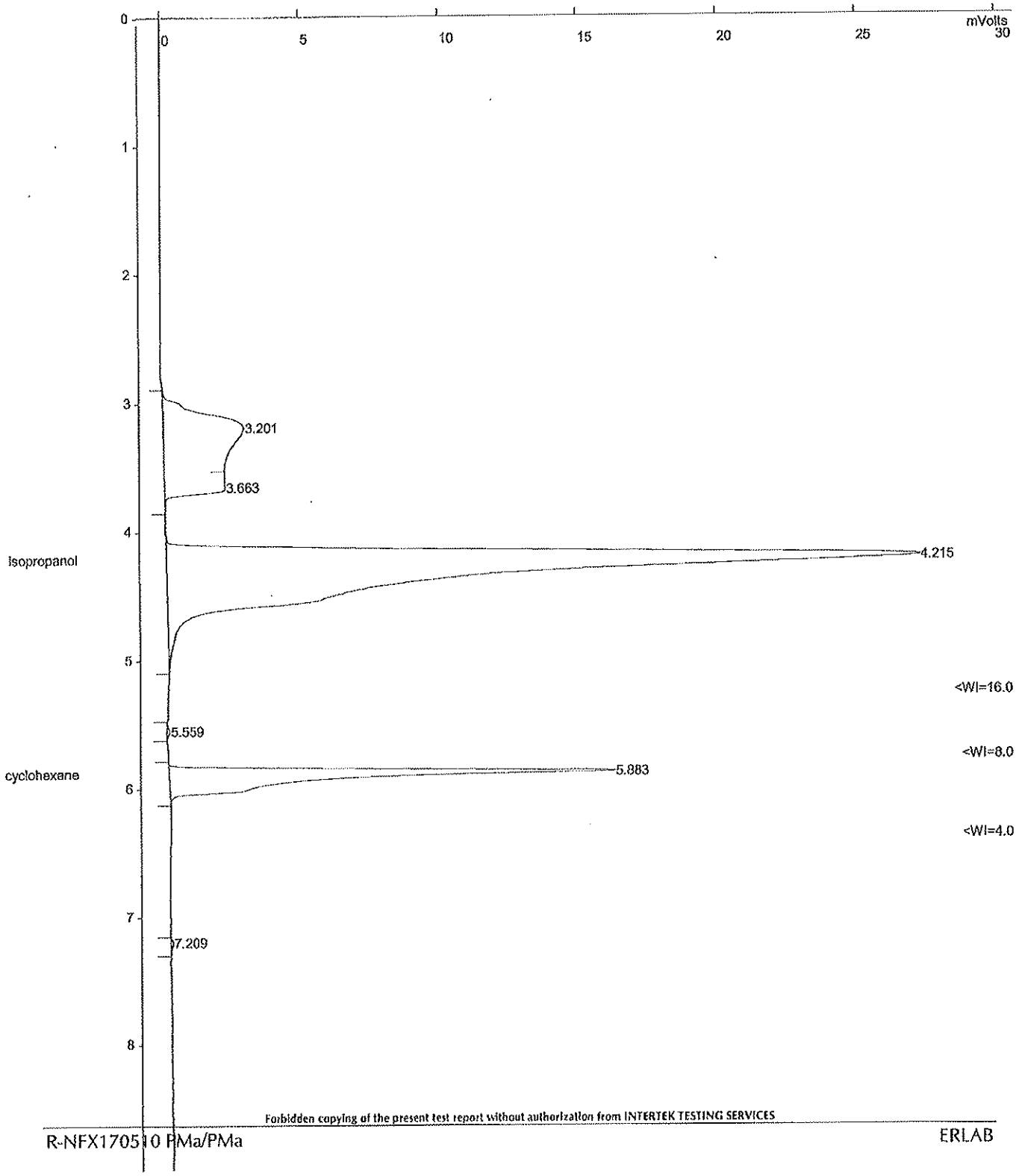
Injection Date: 25/05/2010 10:28 Calculation Date: 25/05/2010 10:36

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 129 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\25-05-2010 entree 10;28;03.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 25/05/2010 10:28 Calculation Date: 25/05/2010 10:36

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		13.4096	3.201	0.000	72566	BV	14.5	
2		4.2487	3.663	0.000	22992	VP	37.6	
3	isopropanol	67.2195	4.215	-0.015	363757	PB	9.8	
4		0.0686	5.559	0.000	371	BB	3.5	
5	cyclohexane	14.9938	5.883	0.003	81139	BB	3.5	
6		0.0597	7.209	0.000	323	BB	3.8	
	Totals:	99.9999		-0.012	541148			

Total Unidentified Counts : 96253 counts

Detected Peaks: 6 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 8 microVolts

Noise (used): 20 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\25-05-2010 entree 10;52;40.r
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

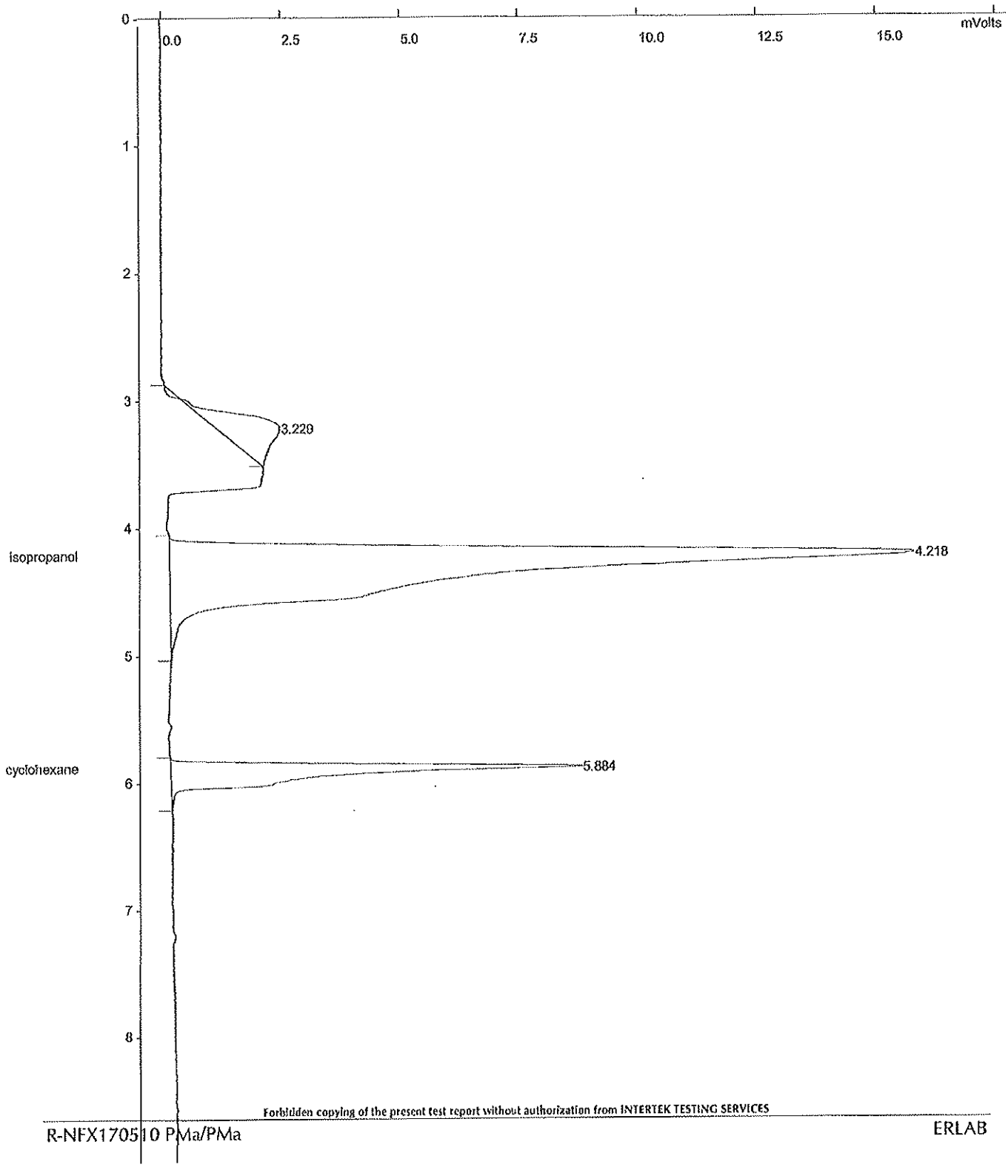
Injection Date: 25/05/2010 10:52 Calculation Date: 25/05/2010 11:01

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 74 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.993 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\25-05-2010 entree 10;52;40.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 25/05/2010 10:52 Calculation Date: 25/05/2010 11:01

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		7.2493	3.229	0.000	21701	BB	0.0	
2	isopropanol	75.7868	4.218	-0.012	226870	BB	10.8	
3	cyclohexane	16.9639	5.884	0.004	50782	BB	4.3	
	Totals:	100.0000		-0.008	299353			

Total Unidentified Counts : 21701 counts

Detected Peaks: 3 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -23 microVolts

Noise (used): 43 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\25-05-2010 entree 11;17;29.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

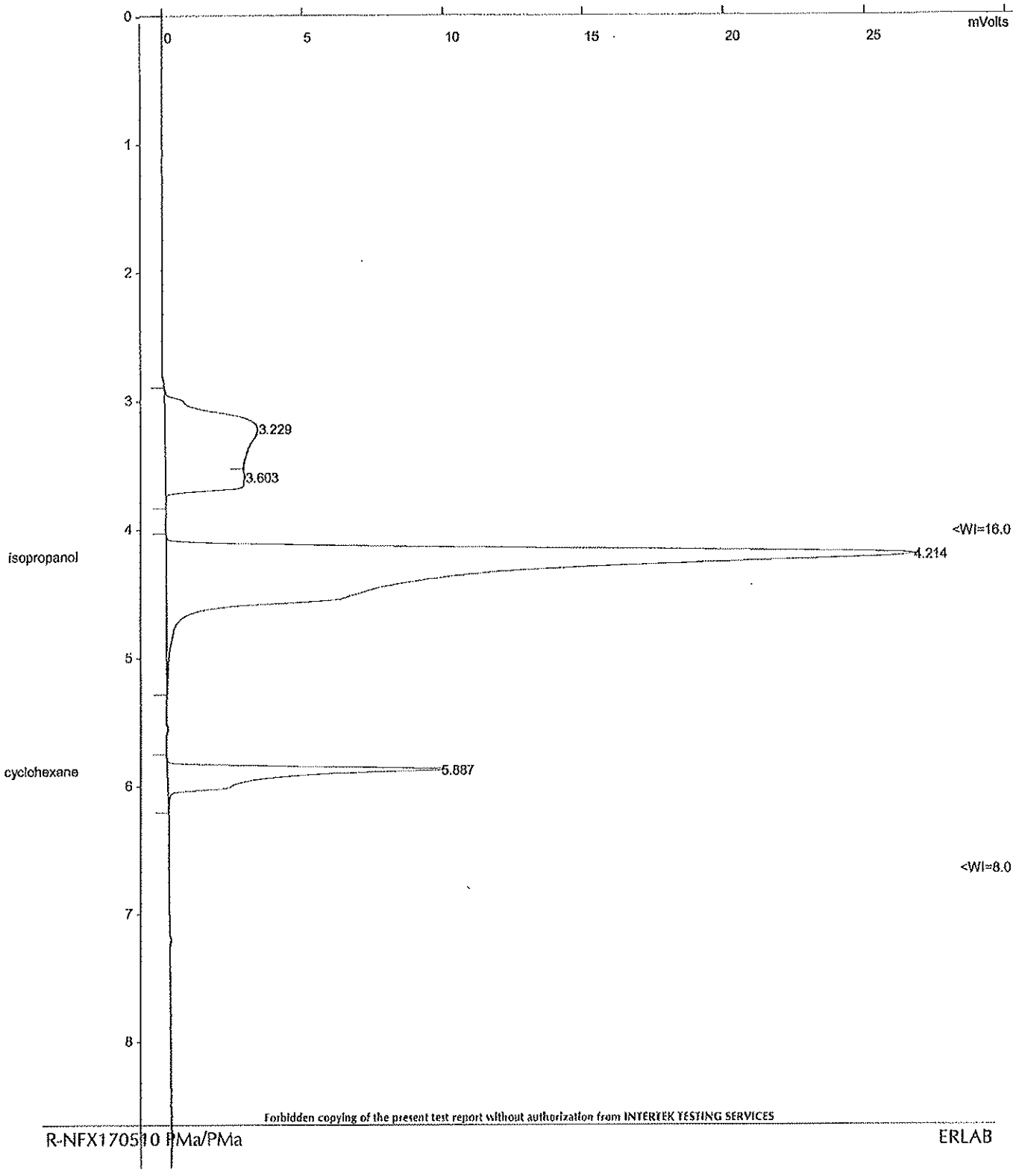
Injection Date: 25/05/2010 11:17 Calculation Date: 25/05/2010 11:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 127 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.993 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\25-05-2010 entree 11;17;29.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 25/05/2010 11:17 Calculation Date: 25/05/2010 11:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		15.9290	3.229	0.000	86261	BV	17.2	
2		5.3717	3.603	0.000	29090	VB	37.1	
3	isopropanol	68.4300	4.214	-0.016	370572	BB	10.0	
4	cyclohexane	10.2693	5.887	0.007	55612	BB	4.2	
	Totals:	100.0000		-0.009	541535			

Total Unidentified Counts : 115351 counts

Detected Peaks: 4 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 0 microVolts

Noise (used): 38 microVolts - monitored before this run

Manual injection

****

WEIGHT DATA TABLE AND CHROMATOGRAMS

ISOPROPANOL TEST

See attached documents.

WEIGHT DATA TABLE : ISOPROPANOL TEST

time	weight (g)	evaporation rate (g/min)	total evaporation (g)
10:48:44	0,8		0,8
10:49:43	2,6	1,8	2,6
10:50:43	4,4	1,8	4,4
10:51:44	6,3	1,9	6,3
10:52:43	8,1	1,8	8,1
10:53:43	10	1,9	10,0
10:54:43	11,9	1,9	11,9
10:55:43	13,7	1,8	13,7
10:56:44	15,5	1,8	15,5
10:57:43	17,4	1,9	17,4
10:58:43	19,2	1,8	19,2
10:59:43	21	1,8	21,0
11:00:44	22,9	1,9	22,9
11:01:44	24,7	1,8	24,7
11:02:43	26,5	1,8	26,5
11:03:44	28,3	1,8	28,3
11:04:44	30,2	1,9	30,2
11:05:43	32	1,8	32,0
11:06:43	33,8	1,8	33,8
11:07:43	35,6	1,8	35,6
11:08:43	37,5	1,9	37,5
11:09:44	39,3	1,8	39,3
11:10:43	41,2	1,9	41,2
11:11:43	43	1,8	43,0
11:12:43	44,9	1,9	44,9
11:13:44	46,7	1,8	46,7
11:14:43	48,5	1,8	48,5
11:15:43	50,3	1,8	50,3
11:16:43	52,2	1,9	52,2
11:17:43	53,9	1,7	53,9
11:18:44	55,7	1,8	55,7
11:19:43	57,5	1,8	57,5
11:20:43	59,3	1,8	59,3
11:21:43	61	1,7	61,0
11:22:43	62,9	1,9	62,9
11:23:44	64,6	1,7	64,6
11:24:43	66,4	1,8	66,4
11:25:43	68,2	1,8	68,2
11:26:43	69,9	1,7	69,9
11:27:43	71,7	1,8	71,7
11:28:43	73,5	1,8	73,5
11:29:43	75,3	1,8	75,3
11:30:43	77,1	1,8	77,1
11:31:43	78,8	1,7	78,8
11:32:43	80,6	1,8	80,6
11:33:43	82,4	1,8	82,4
11:34:43	84,1	1,7	84,1
11:35:43	85,8	1,7	85,8
11:36:43	87,6	1,8	87,6
11:37:43	89,3	1,7	89,3
11:38:43	91,1	1,8	91,1
11:39:43	92,8	1,7	92,8
11:40:43	94,6	1,8	94,6

11:41:43	96,2	1,6	96,2
11:42:43	97,9	1,7	97,9
11:43:43	99,6	1,7	99,6
11:44:43	101,3	1,7	101,3
11:45:43	103	1,7	103,0
11:46:43	104,7	1,7	104,7
11:47:43	106,4	1,7	106,4
11:48:43	108,2	1,8	108,2
11:49:43	109,8	1,6	109,8
11:50:43	111,5	1,7	111,5
11:51:43	113,3	1,8	113,3
11:52:43	115	1,7	115,0
11:53:43	116,7	1,7	116,7
11:54:43	118,3	1,6	118,3
11:55:43	120,1	1,8	120,1
11:56:43	121,8	1,7	121,8
11:57:43	123,5	1,7	123,5
11:58:43	125,3	1,8	125,3
11:59:43	127	1,7	127,0
12:00:43	128,8	1,8	128,8
12:01:43	130,5	1,7	130,5
12:02:43	132,2	1,7	132,2
12:03:43	133,9	1,7	133,9
12:04:43	135	1,1	135,0
12:05:43	136,2	1,2	136,2
12:06:43	137,6	1,4	137,6
12:07:43	139,3	1,7	139,3
12:08:43	141	1,7	141,0
12:09:43	142,8	1,8	142,8
12:10:43	144,5	1,7	144,5
12:11:43	146,2	1,7	146,2
12:12:43	148	1,8	148,0
12:13:43	149,8	1,8	149,8
12:14:43	151,5	1,7	151,5
12:15:43	153,2	1,7	153,2
12:16:43	154,9	1,7	154,9
12:17:43	156,6	1,7	156,6
12:18:43	158,4	1,8	158,4
12:19:43	160,1	1,7	160,1
12:20:43	161,8	1,7	161,8
12:21:43	163,5	1,7	163,5
12:22:43	165,3	1,8	165,3
12:23:43	167	1,7	167,0
12:24:43	168,6	1,6	168,6
12:25:43	170,3	1,7	170,3
12:26:43	172,1	1,8	172,1
12:27:43	173,7	1,6	173,7
12:28:43	175,4	1,7	175,4
12:29:42	177,1	1,7	177,1
12:30:43	178,9	1,8	178,9
12:31:42	180,6	1,7	180,6
12:32:43	182,4	1,8	182,4
12:33:43	184,1	1,7	184,1
12:34:42	185,9	1,8	185,9
12:35:43	187,7	1,8	187,7
12:36:43	189,4	1,7	189,4

12:37:43	191,3	1,9	191,3
12:38:43	193	1,7	193,0
12:39:43	194,8	1,8	194,8
12:40:43	196,6	1,8	196,6
12:41:42	198,3	1,7	198,3
12:42:42	200,1	1,8	200,1
12:43:43	201,8	1,7	201,8
12:44:42	203,6	1,8	203,6
12:45:42	205,4	1,8	205,4
12:46:42	207,1	1,7	207,1
12:47:43	208,8	1,7	208,8
12:48:43	210,5	1,7	210,5
12:49:42	212,2	1,7	212,2
12:50:42	213,9	1,7	213,9
12:51:43	215,7	1,8	215,7
12:52:42	217,4	1,7	217,4
12:53:42	219,1	1,7	219,1
12:54:43	220,9	1,8	220,9
12:55:42	222,6	1,7	222,6
12:56:42	224,3	1,7	224,3
12:57:43	226,1	1,8	226,1
12:58:42	227,8	1,7	227,8
12:59:42	229,6	1,8	229,6
13:00:42	231,3	1,7	231,3
13:01:42	232,9	1,6	232,9
13:02:42	234,7	1,8	234,7
13:03:43	236,4	1,7	236,4
13:04:42	238,1	1,7	238,1
13:05:42	239,8	1,7	239,8
13:06:42	241,5	1,7	241,5
13:07:43	243,2	1,7	243,2
13:08:42	244,7	1,5	244,7
13:09:42	245,9	1,2	245,9
13:10:42	247,2	1,3	247,2
13:11:42	248,6	1,4	248,6
13:12:42	249,8	1,2	249,8
13:13:42	251,3	1,5	251,3
13:14:42	252,9	1,6	252,9
13:15:43	254,5	1,6	254,5
13:16:42	256,2	1,7	256,2
13:17:42	257,8	1,6	257,8
13:18:42	259,4	1,6	259,4
13:19:42	261,1	1,7	261,1
13:20:42	262,7	1,6	262,7
13:21:42	264,4	1,7	264,4
13:22:42	266,1	1,7	266,1
13:23:42	267,8	1,7	267,8
13:24:42	269,5	1,7	269,5
13:25:42	271,1	1,6	271,1
13:26:42	272,8	1,7	272,8
13:27:42	274,4	1,6	274,4
13:28:42	276	1,6	276,0
13:29:42	277,7	1,7	277,7
13:30:42	279,3	1,6	279,3
13:31:42	280,9	1,6	280,9
13:32:42	282,6	1,7	282,6

13:33:42	284,2	1,6	284,2
13:34:42	285,8	1,6	285,8
13:35:42	287,4	1,6	287,4
13:36:42	289	1,6	289,0
13:37:42	290,7	1,7	290,7
13:38:42	292,3	1,6	292,3
13:39:42	294	1,7	294,0
13:40:42	295,7	1,7	295,7
13:41:42	297,5	1,8	297,5
13:42:42	299,1	1,6	299,1
13:43:42	300,8	1,7	300,8
13:44:42	302,6	1,8	302,6
13:45:42	304,3	1,7	304,3
13:46:42	306	1,7	306,0
13:47:42	307,7	1,7	307,7
13:48:42	309,4	1,7	309,4
13:49:42	311	1,6	311,0
13:50:42	312,7	1,7	312,7
13:51:42	314,4	1,7	314,4
13:52:42	316,1	1,7	316,1
13:53:42	317,7	1,6	317,7
13:54:42	319,4	1,7	319,4
13:55:42	321,1	1,7	321,1
13:56:42	322,7	1,6	322,7
13:57:42	324,3	1,6	324,3
13:58:42	326	1,7	326,0
13:59:42	327,6	1,6	327,6
14:00:42	329,2	1,6	329,2
14:01:42	330,8	1,6	330,8
14:02:42	332,4	1,6	332,4
14:03:42	334,1	1,7	334,1
14:04:42	335,7	1,6	335,7
14:05:42	337,3	1,6	337,3
14:06:42	338,9	1,6	338,9
14:07:42	340,5	1,6	340,5
14:08:42	342,1	1,6	342,1
14:09:42	343,7	1,6	343,7
14:10:42	345,3	1,6	345,3
14:11:42	346,8	1,5	346,8
14:12:42	348,4	1,6	348,4
14:13:42	350	1,6	350,0
14:14:42	351,7	1,7	351,7
14:15:42	353,5	1,8	353,5
14:16:41	355,4	1,9	355,4
14:17:42	357,2	1,8	357,2
14:18:42	359,1	1,9	359,1
14:19:42	360,9	1,8	360,9
14:20:42	362,8	1,9	362,8
14:21:41	364,6	1,8	364,6
14:22:42	366,5	1,9	366,5
14:23:42	368,3	1,8	368,3
14:24:41	370,2	1,9	370,2
14:25:42	372	1,8	372,0
14:26:42	373,9	1,9	373,9
14:27:42	375,8	1,9	375,8
14:28:42	377,6	1,8	377,6

14:29:41	379,4	1,8	379,4
14:30:42	381,2	1,8	381,2
14:31:42	383,1	1,9	383,1
14:32:41	384,8	1,7	384,8
14:33:42	386,7	1,9	386,7
14:34:41	388,4	1,7	388,4
14:35:42	390,3	1,9	390,3
14:36:42	392,1	1,8	392,1
14:37:41	393,9	1,8	393,9
14:38:41	395,8	1,9	395,8
14:39:42	397,6	1,8	397,6
14:40:42	399,4	1,8	399,4
14:41:41	401	1,6	401,0
14:42:41	402,9	1,9	402,9
14:43:42	404,6	1,7	404,6
14:44:42	406,3	1,7	406,3
14:45:41	408	1,7	408,0
14:46:42	409,7	1,7	409,7
14:47:41	411,4	1,7	411,4
14:48:41	413,1	1,7	413,1
14:49:42	414,8	1,7	414,8
14:50:41	416,5	1,7	416,5
14:51:42	418,1	1,6	418,1
14:52:41	419,8	1,7	419,8
14:53:41	421,5	1,7	421,5
14:54:41	423,2	1,7	423,2
14:55:42	424,8	1,6	424,8
14:56:42	426,5	1,7	426,5
14:57:41	428,1	1,6	428,1
14:58:41	429,8	1,7	429,8
14:59:41	431,5	1,7	431,5
15:00:42	433,1	1,6	433,1
15:01:41	434,9	1,8	434,9
15:02:41	436,6	1,7	436,6
15:03:41	438,3	1,7	438,3
15:04:42	440,1	1,8	440,1
15:05:41	441,8	1,7	441,8
15:06:41	443,4	1,6	443,4
15:07:41	445,1	1,7	445,1
15:08:41	446,7	1,6	446,7
15:09:41	448,4	1,7	448,4
15:10:41	450	1,6	450,0
15:11:41	451,7	1,7	451,7
15:12:41	453,3	1,6	453,3
15:13:41	455	1,7	455,0
15:14:41	456,6	1,6	456,6
15:15:41	458,3	1,7	458,3
15:16:41	459,9	1,6	459,9
15:17:41	461,6	1,7	461,6
15:18:41	463,3	1,7	463,3
15:19:41	464,9	1,6	464,9
15:20:41	466,6	1,7	466,6
15:21:41	468,3	1,7	468,3
15:22:41	469,9	1,6	469,9
15:23:41	471,6	1,7	471,6
15:24:41	473,3	1,7	473,3

15:25:41	474,9	1,6	474,9
15:26:41	476,6	1,7	476,6
15:27:41	478,2	1,6	478,2
15:28:41	479,8	1,6	479,8
15:29:41	481,4	1,6	481,4
15:30:41	483,1	1,7	483,1
15:31:41	484,7	1,6	484,7
15:32:41	486,4	1,7	486,4
15:33:41	487,9	1,5	487,9
15:34:41	489,6	1,7	489,6
15:35:41	491,2	1,6	491,2
15:36:41	492,8	1,6	492,8
15:37:41	494,4	1,6	494,4
15:38:41	496	1,6	496,0
15:39:41	497,7	1,7	497,7
15:40:41	499,4	1,7	499,4
15:41:41	501	1,6	501,0
15:42:41	502,6	1,6	502,6
15:43:41	504,2	1,6	504,2
15:44:41	505,8	1,6	505,8
15:45:41	507,4	1,6	507,4
15:46:41	509	1,6	509,0
15:47:41	510,6	1,6	510,6
15:48:41	512,2	1,6	512,2
15:49:41	513,8	1,6	513,8
15:50:41	515,4	1,6	515,4
15:51:41	517	1,6	517,0
15:52:41	518,7	1,7	518,7
15:53:41	520,3	1,6	520,3
15:54:41	521,9	1,6	521,9
15:55:41	523,7	1,8	523,7
15:56:41	525,5	1,8	525,5
15:57:41	527,5	2,0	527,5
15:58:41	529,5	2,0	529,5
15:59:41	531,7	2,2	531,7
16:00:41	533,7	2,0	533,7
16:01:41	535,7	2,0	535,7
16:02:41	537,8	2,1	537,8
16:03:41	539,9	2,1	539,9
16:04:41	541,9	2,0	541,9
16:05:41	544	2,1	544,0
16:06:40	546	2,0	546,0
16:07:41	548	2,0	548,0
16:08:41	550	2,0	550,0
16:09:40	552,1	2,1	552,1
16:10:41	554,1	2,0	554,1
16:11:41	556,2	2,1	556,2
16:12:41	558,2	2,0	558,2
16:13:41	560,3	2,1	560,3
16:14:41	562,4	2,1	562,4
16:15:41	564,5	2,1	564,5
16:16:41	566,5	2,0	566,5
16:17:41	568,5	2,0	568,5
16:18:40	570,6	2,1	570,6
16:19:41	572,7	2,1	572,7
16:20:41	574,7	2,0	574,7

16:21:41	576,8	2,1	576,8
16:22:40	578,8	2,0	578,8
16:23:41	580,9	2,1	580,9
16:24:41	582,9	2,0	582,9
16:25:40	584,9	2,0	584,9
16:26:40	586,9	2,0	586,9
16:27:41	588,8	1,9	588,8
16:28:41	590,9	2,1	590,9
16:29:41	593	2,1	593,0
16:30:41	595	2,0	595,0
16:31:41	596,9	1,9	596,9
16:32:41	599	2,1	599,0
16:33:41	601,1	2,1	601,1
16:34:41	603	1,9	603,0
16:35:40	605,1	2,1	605,1
16:36:41	607,1	2,0	607,1
16:37:41	609,1	2,0	609,1
16:38:40	611,1	2,0	611,1
16:39:41	613,2	2,1	613,2
16:40:41	615,1	1,9	615,1
16:41:40	617,2	2,1	617,2
16:42:41	619,2	2,0	619,2
16:43:41	621,2	2,0	621,2
16:44:40	623,2	2,0	623,2
16:45:41	625,2	2,0	625,2
16:46:41	627,1	1,9	627,1
16:47:40	629,1	2,0	629,1
16:48:41	631,1	2,0	631,1
16:49:40	633,1	2,0	633,1
16:50:40	635,1	2,0	635,1
16:51:40	637,1	2,0	637,1
16:52:40	639,1	2,0	639,1
16:53:40	641,1	2,0	641,1
16:54:40	643,1	2,0	643,1
16:55:40	645,1	2,0	645,1
16:56:40	647,1	2,0	647,1
16:57:40	649,1	2,0	649,1
16:58:40	651,1	2,0	651,1
16:59:40	653,1	2,0	653,1
17:00:40	655,1	2,0	655,1
17:01:40	657,1	2,0	657,1
17:02:40	659,1	2,0	659,1
17:03:40	661,1	2,0	661,1
17:04:40	663	1,9	663,0
17:05:40	664,9	1,9	664,9
17:06:40	667	2,1	667,0
17:07:40	668,9	1,9	668,9
17:08:40	670,9	2,0	670,9
17:09:40	672,9	2,0	672,9
17:10:40	674,8	1,9	674,8
17:11:40	676,7	1,9	676,7
17:12:40	678,7	2,0	678,7
17:13:40	680,7	2,0	680,7
17:14:40	682,7	2,0	682,7
17:15:40	684,7	2,0	684,7
17:16:40	686,6	1,9	686,6

17:17:40	688,6	2,0	688,6
17:18:40	690,5	1,9	690,5
17:19:40	692,5	2,0	692,5
17:20:40	694,4	1,9	694,4
17:21:40	696,4	2,0	696,4
17:22:40	698,3	1,9	698,3
17:23:40	700,2	1,9	700,2
17:24:40	702,1	1,9	702,1
17:25:40	704,1	2,0	704,1
17:26:40	706	1,9	706,0
17:27:40	707,9	1,9	707,9
17:28:40	709,9	2,0	709,9
17:29:40	711,8	1,9	711,8
17:30:40	713,8	2,0	713,8
17:31:40	715,6	1,8	715,6

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 10;58;26.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

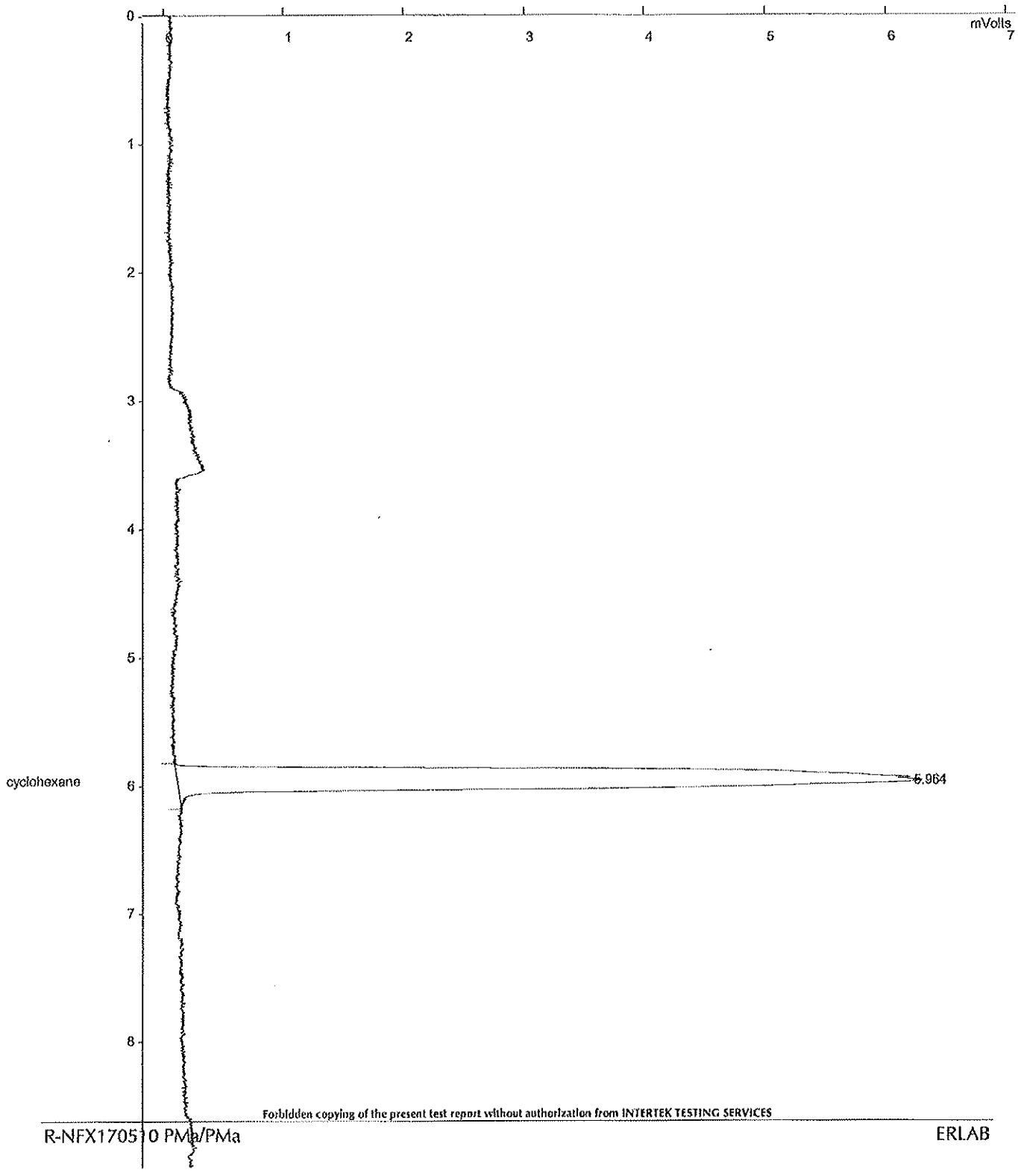
Injection Date: 02/06/2010 10:58 Calculation Date: 02/06/2010 11:07

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 29 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 10;58;26.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 10:58 Calculation Date: 02/06/2010 11:07

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.964	0.084	55800	BB	9.7	
	Totals:	100.0000		0.084	55800			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 45 microVolts

Noise (used): 38 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 voie respiratoire 11;22;39.
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : voie respiratoire

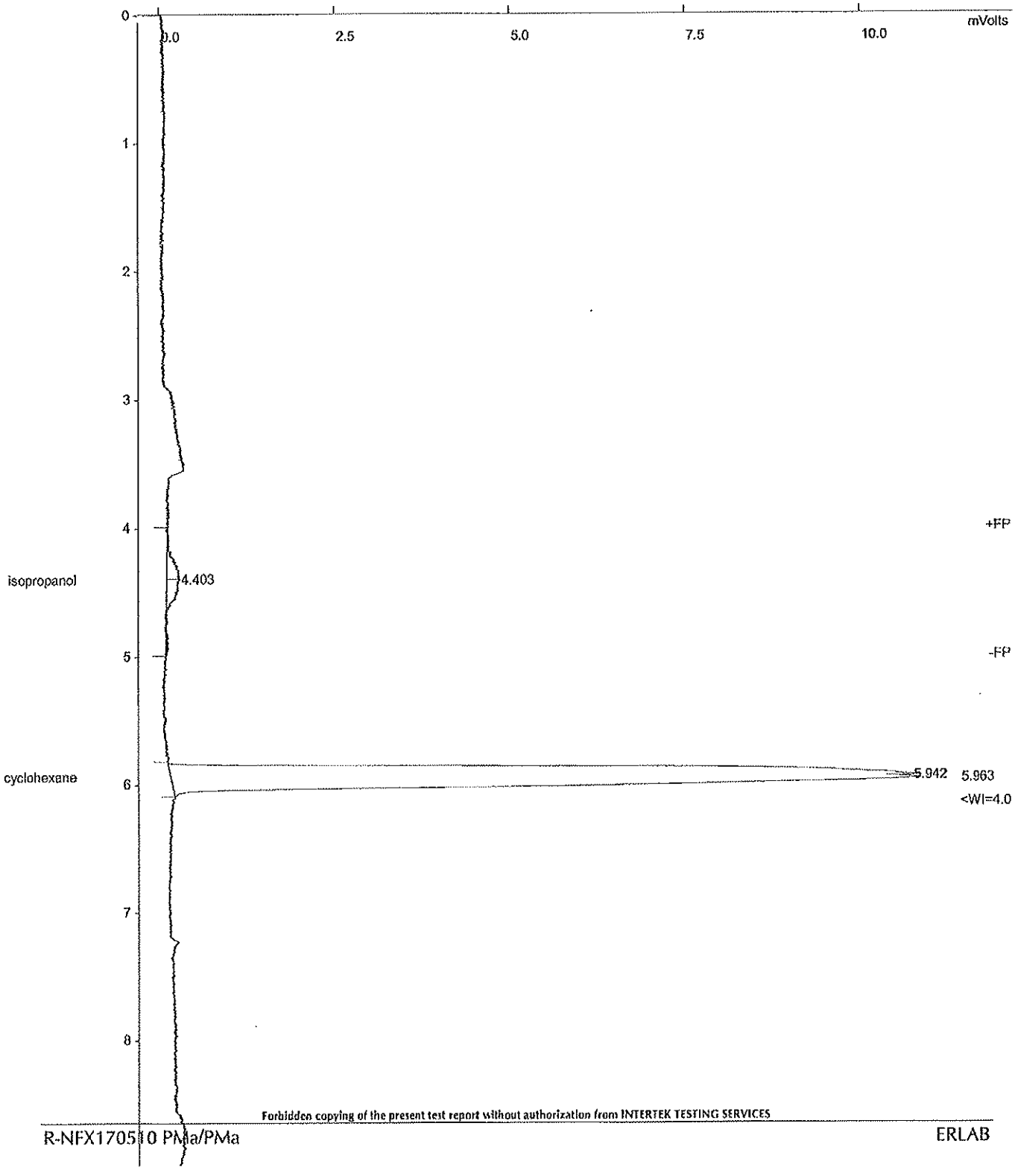
Injection Date: 02/06/2010 11:22 Calculation Date: 04/06/2010 11:18

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 51 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 voie respiratoire 11;22;39.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : voie respiratoire

Injection Date: 02/06/2010 11:22 Calculation Date: 04/06/2010 11:18

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	3.3759	4.403	0.013	3316	BB	16.7	
2	cyclohexane	51.2454	5.942	0.062	50333	BV	8.8	
3		45.3787	5.963	0.000	44571	VB	8.8	
	Totals:	100.0000		0.075	98220			

Total Unidentified Counts : 44571 counts

Detected Peaks: 3 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 32 microVolts

Noise (used): 67 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 11;46;57.r
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

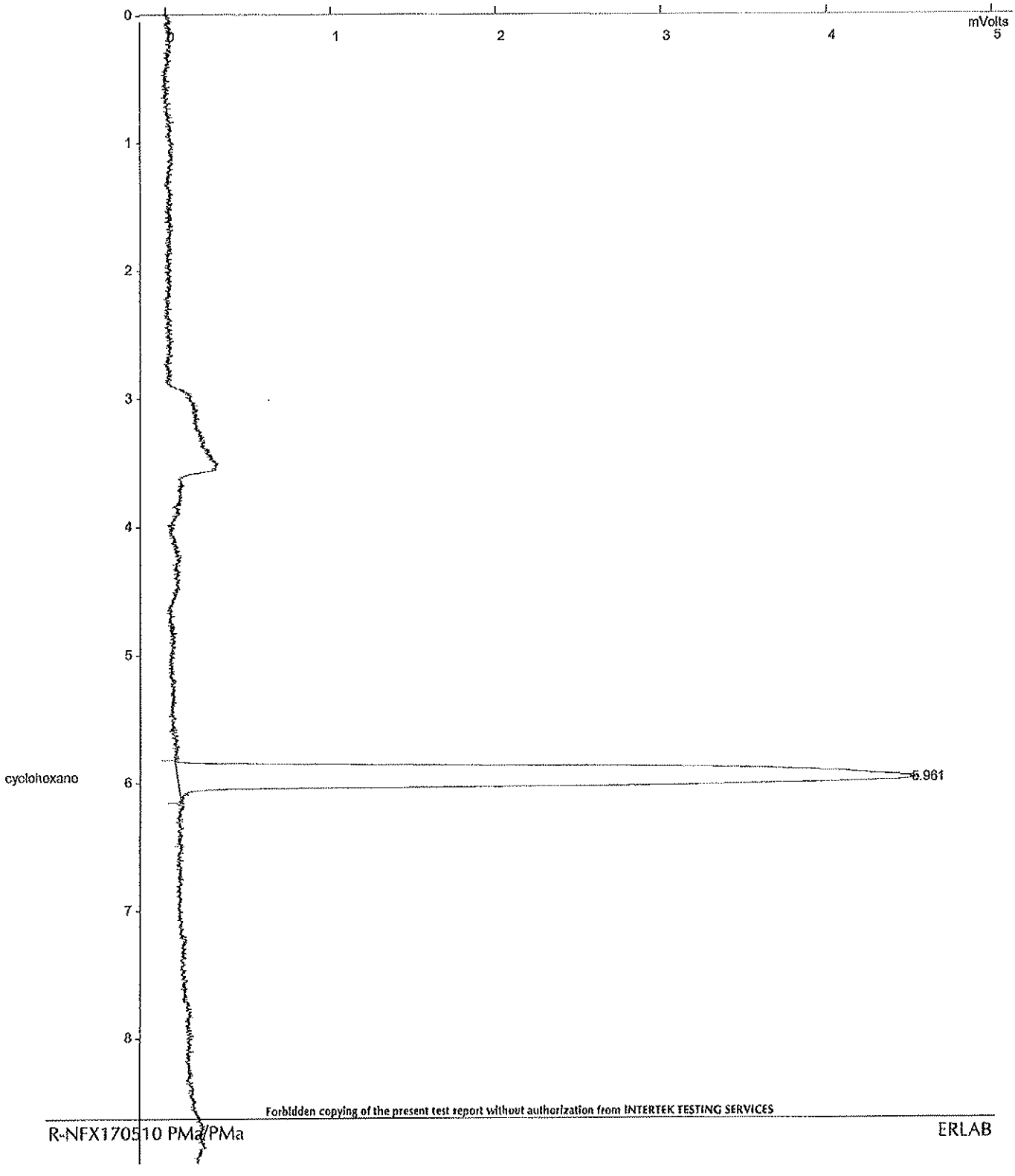
Injection Date: 02/06/2010 11:46 Calculation Date: 02/06/2010 11:55

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 21 Zero Offset = 3%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 11;46;57.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 11:46 Calculation Date: 02/06/2010 11:55

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.961	0.081	40566	BB	9.7	
	Totals:	100.0000		0.081	40566			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 3 microVolts

Noise (used): 65 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 12;11;12.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

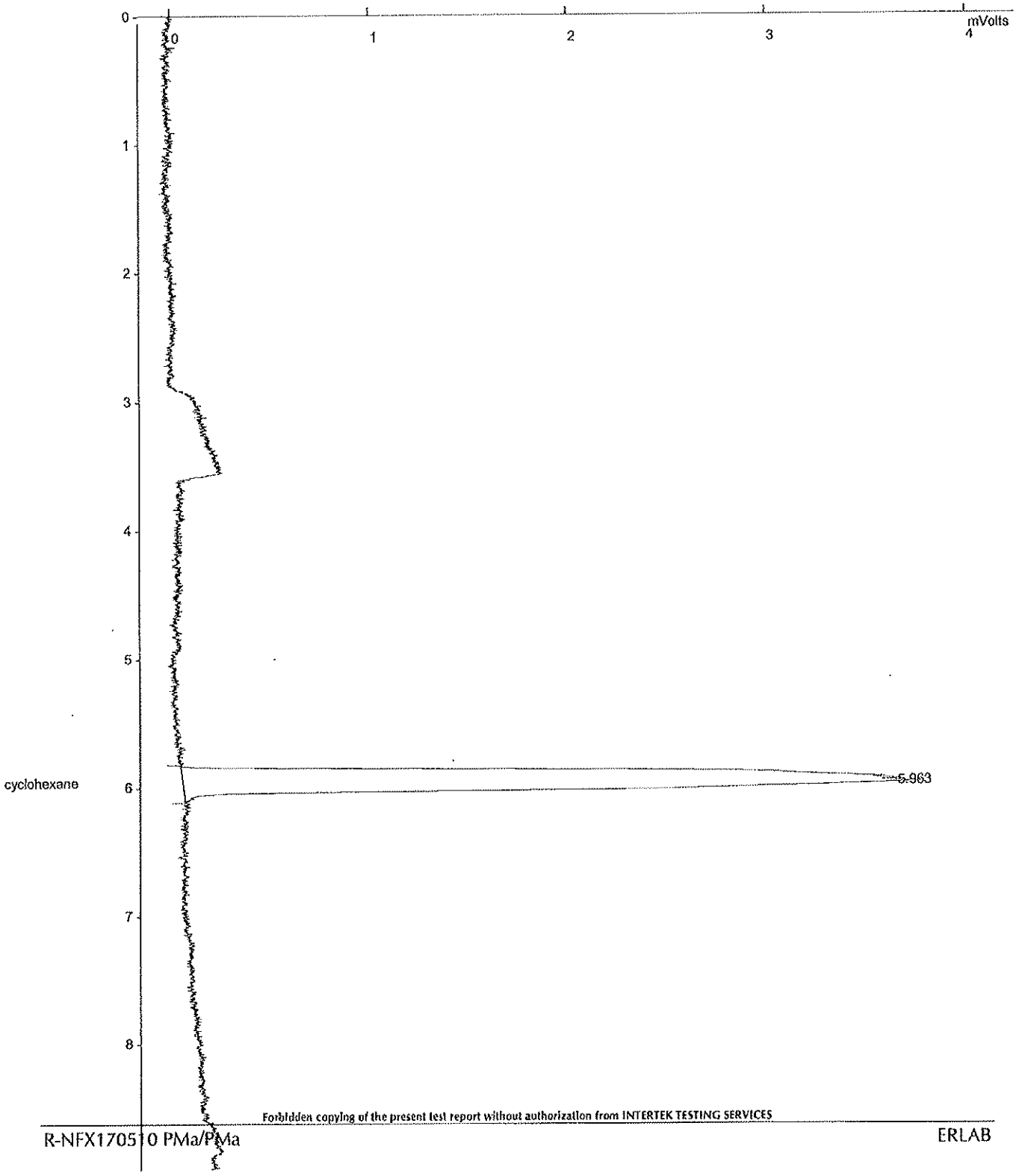
Injection Date: 02/06/2010 12:11 Calculation Date: 02/06/2010 12:20

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 18 Zero Offset = 3%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 12;11;12.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 12:11 Calculation Date: 02/06/2010 12:20

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.963	0.083	32907	BB	9.8	
	Totals:	100.0000		0.083	32907			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 8 microVolts

Noise (used): 89 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 12;35;25.r
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

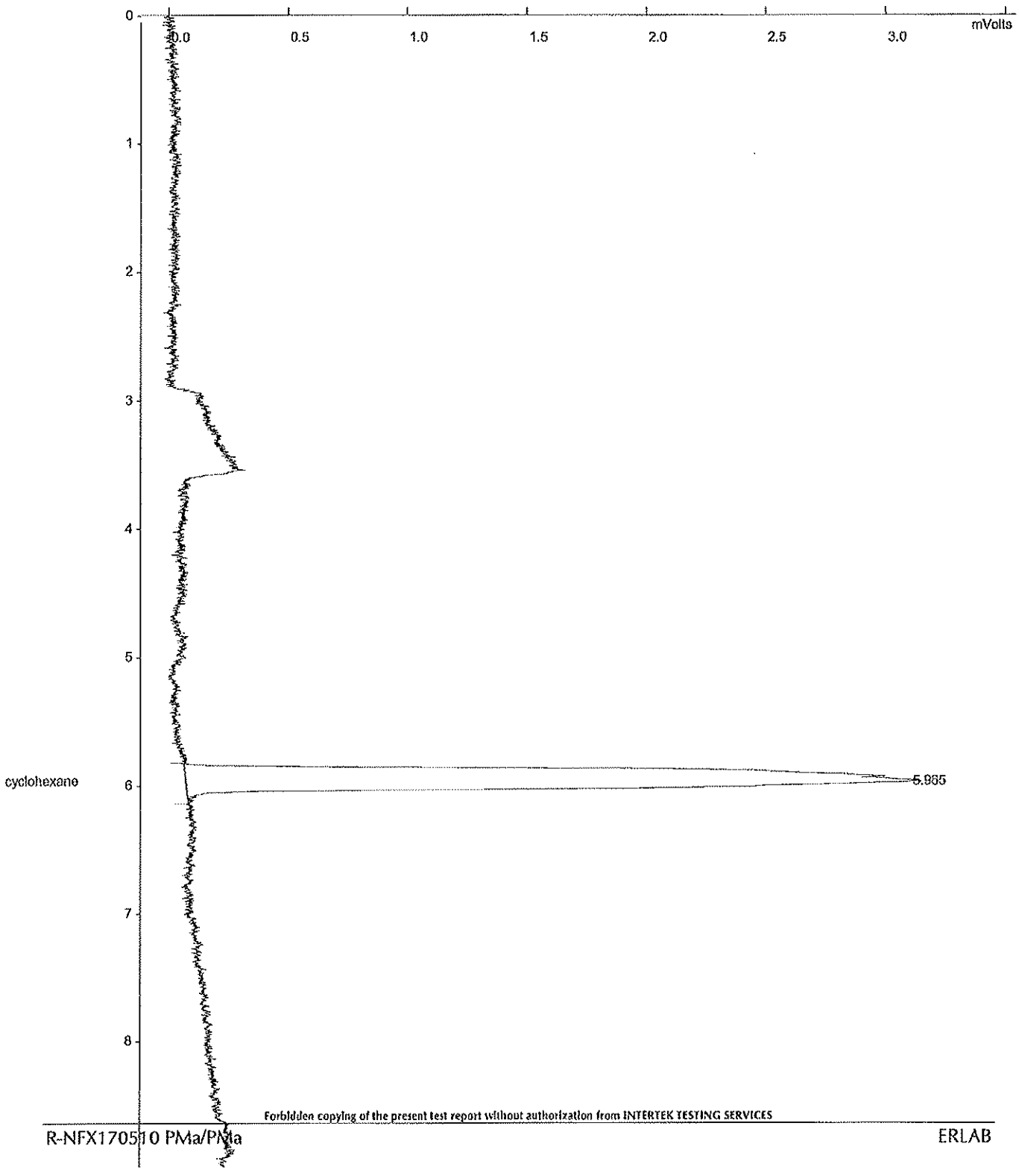
Injection Date: 02/06/2010 12:35 Calculation Date: 02/06/2010 12:44

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 15 Zero Offset = 3%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 12;35;25.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 12:35 Calculation Date: 02/06/2010 12:44

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.965	0.085	27544	BB	9.8	
	Totals:	100.0000		0.085	27544			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -19 microVolts

Noise (used): 76 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 12;59;44.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

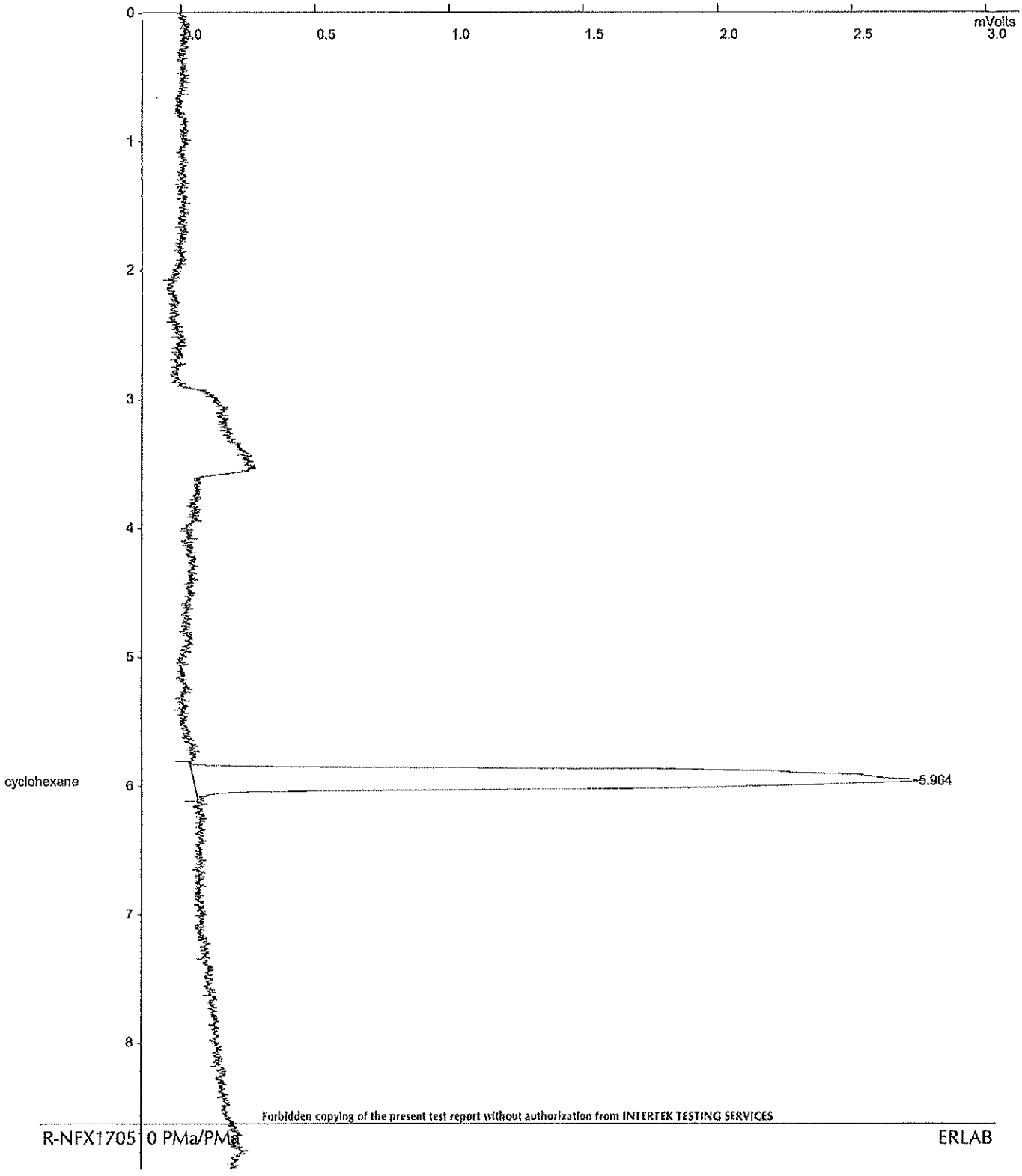
Injection Date: 02/06/2010 12:59 Calculation Date: 02/06/2010 13:08

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 13 Zero Offset = 4%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 12;59;44.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 12:59 Calculation Date: 02/06/2010 13:08

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.964	0.084	24338	BB	9.8	
	Totals:	100.0000		0.084	24338			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 11 microVolts

Noise (used): 75 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 13;24;04.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth **85/171**
Sample ID : sortie

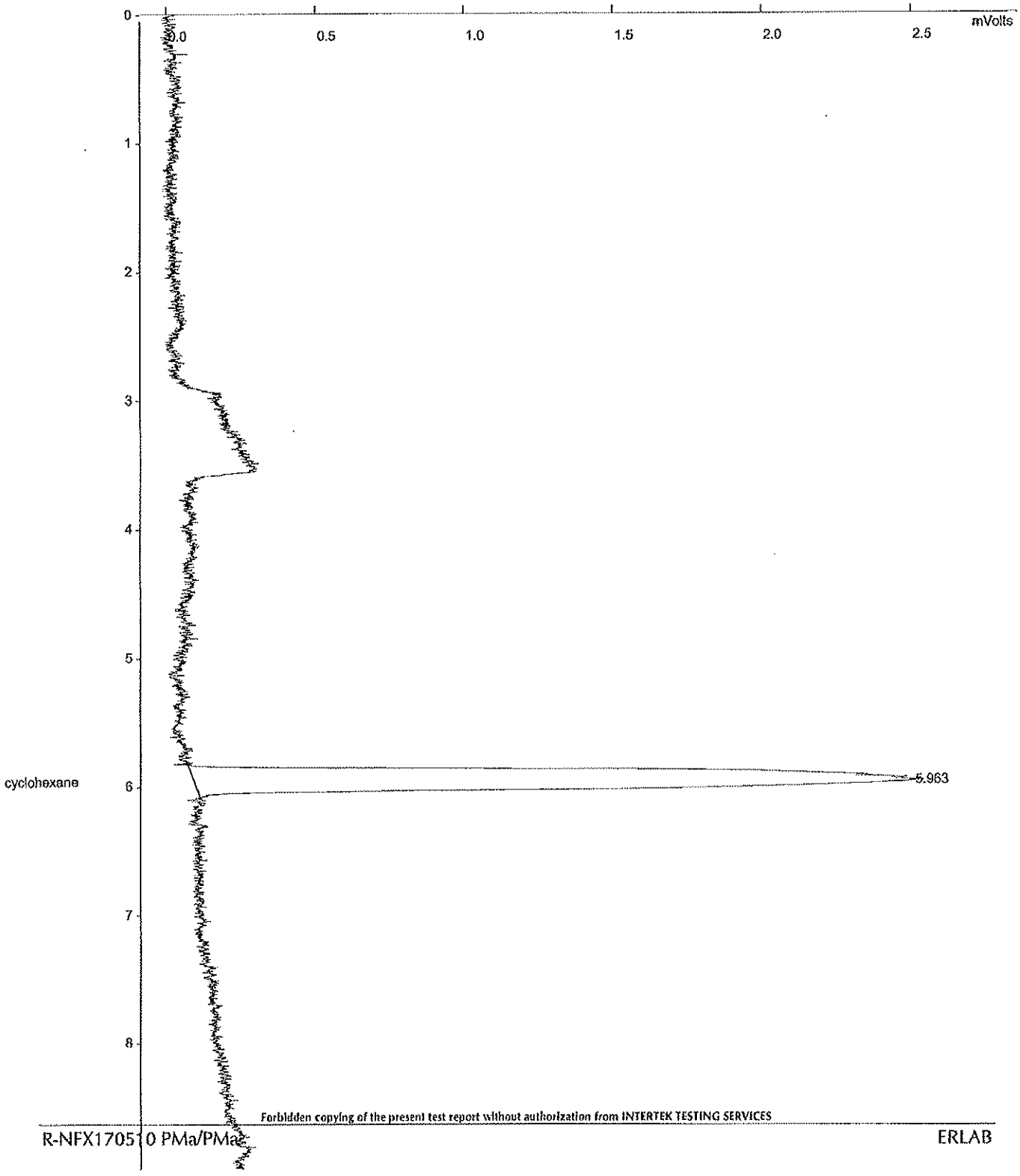
Injection Date: 02/06/2010 13:24 Calculation Date: 02/06/2010 13:32

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 12 Zero Offset = 3%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 13;24;04.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 13:24 Calculation Date: 02/06/2010 13:32

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.963	0.083	21834	BB	9.7	
	Totals:	100.0000		0.083	21834			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 5 microVolts

Noise (used): 71 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 13;48;35.ri
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

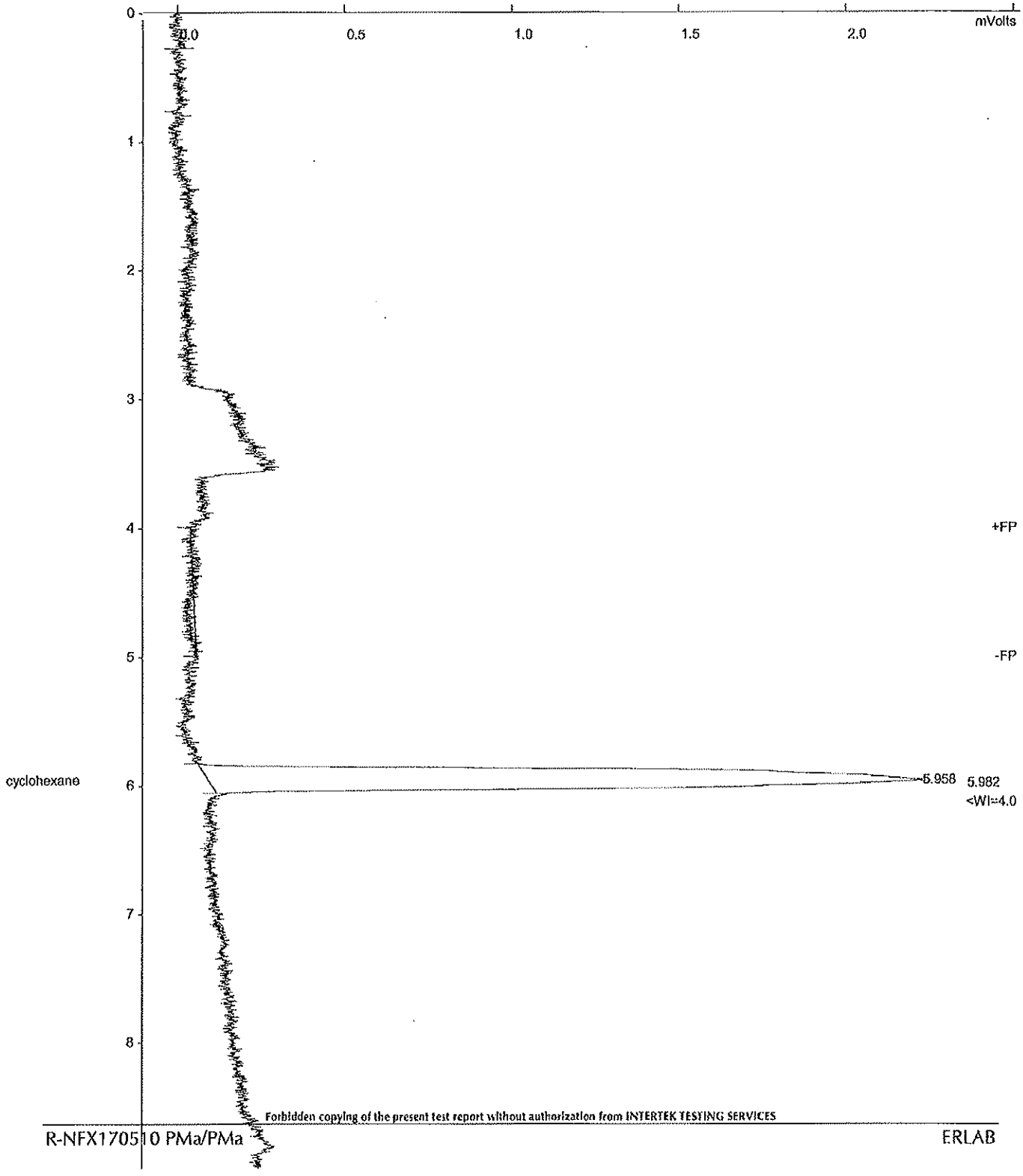
Injection Date: 02/06/2010 13:48 Calculation Date: 04/06/2010 11:18

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1.0 Zero Offset = 4%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 13;48;35.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 13:48 Calculation Date: 04/06/2010 11:18

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	70.1883	5.958	0.078	13197	BV	10.3	
2		29.8117	5.982	0.000	5605	VB	9.6	
	Totals:	100.0000		0.078	18802			

Total Unidentified Counts : 5605 counts

Detected Peaks: 3 Rejected Peaks: 1 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 4 microVolts

Noise (used): 71 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 14;13;01.ru
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

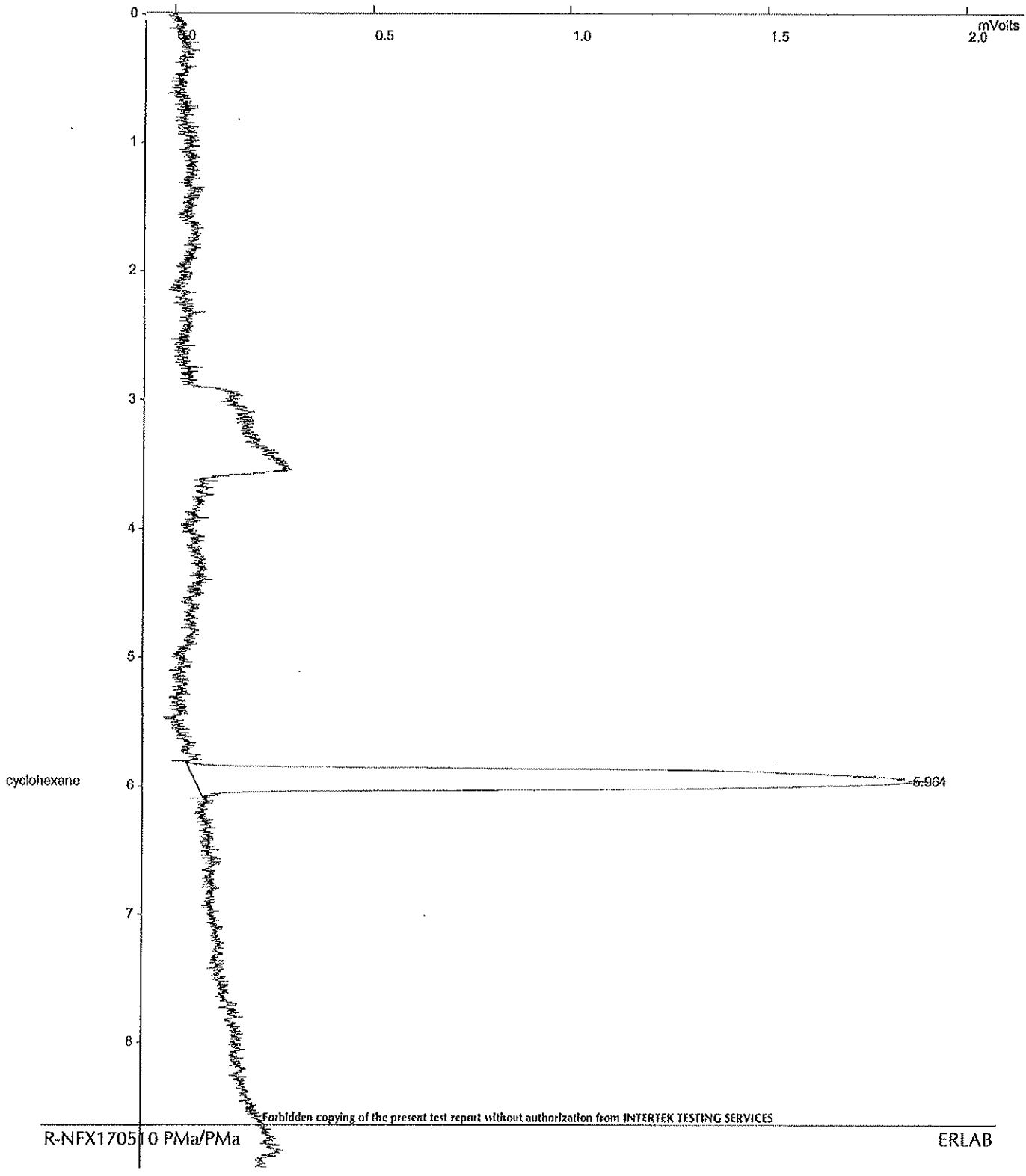
Injection Date: 02/06/2010 14:13 Calculation Date: 02/06/2010 14:21

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 9 Zero Offset = 3%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 14;13;01.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 14:13 Calculation Date: 02/06/2010 14:21

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.964	0.084	16699	BB	9.8	
	Totals:	100.0000		0.084	16699			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 20 microVolts

Noise (used): 47 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 14;37;33.r
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

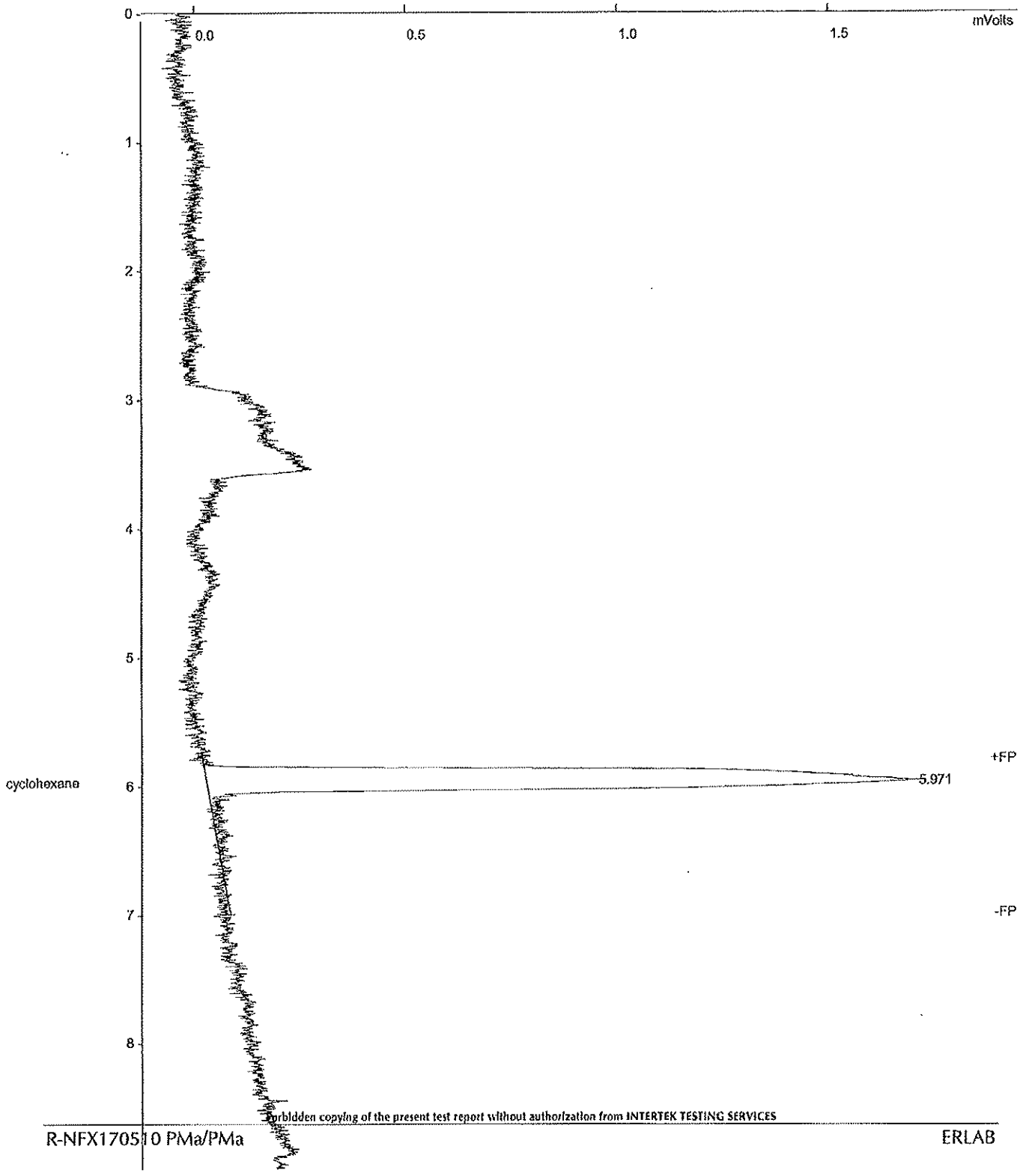
Injection Date: 02/06/2010 14:37 Calculation Date: 02/06/2010 14:46

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 8 Zero Offset = 6%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 14;37;33.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 14:37 Calculation Date: 02/06/2010 14:46

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.971	0.091	15101	BB	9.7	
	Totals:	100.0000		0.091	15101			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -36 microVolts

Noise (used): 72 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 15;02;19.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

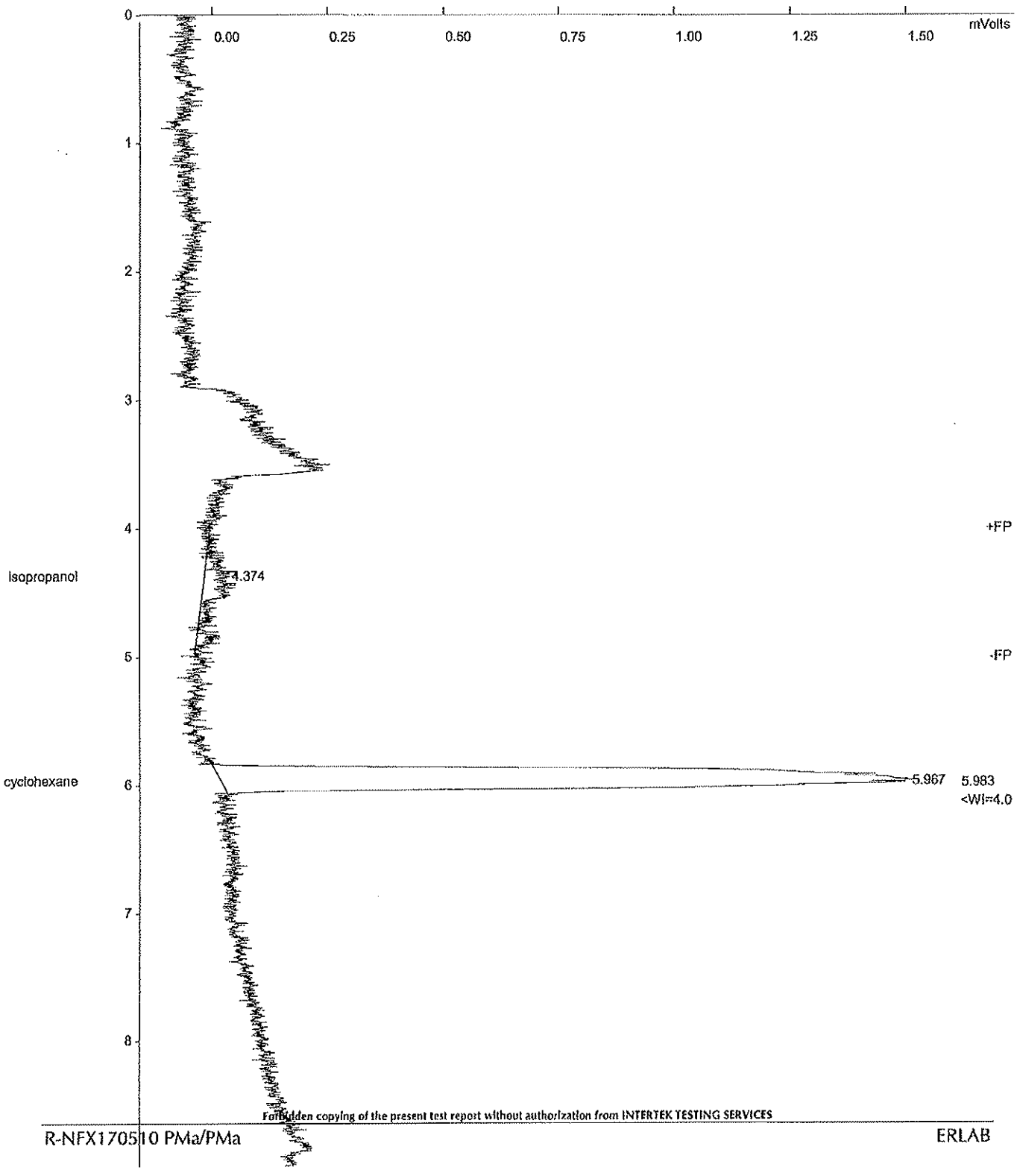
Injection Date: 02/06/2010 15:02 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 7 Zero Offset = 9%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 15;02;19.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 15:02 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	8.1893	4.374	-0.016	1200	BB	0.9	
2	cyclohexane	61.1260	5.967	0.087	8955	BV	11.5	
3		30.6847	5.983	0.000	4496	VB	9.7	
	Totals:	100.0000		0.071	14651			

Total Unidentified Counts : 4496 counts

Detected Peaks: 3 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -74 microVolts

Noise (used): 87 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 15;27;05.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

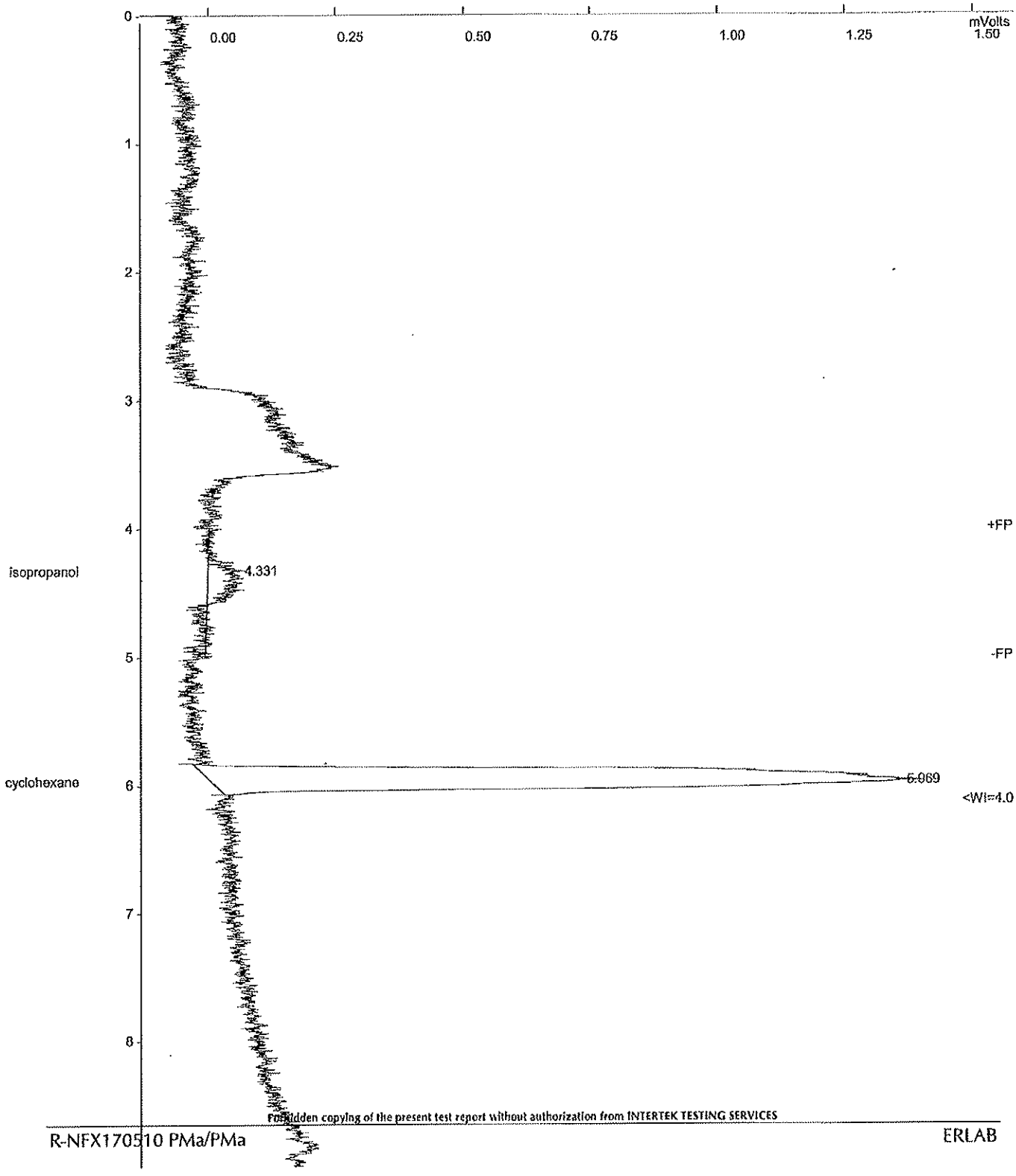
Injection Date: 02/06/2010 15:27 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 7 Zero Offset = 7%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 15;27;05.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 15:27 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	4.5642	4.331	-0.059	592	BB	1.7	
2	cyclohexane	95.4358	5.969	0.089	12368	BB	10.2	
	Totals:	100.0000		0.030	12960			

Total Unidentified Counts : 0 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -68 microVolts

Noise (used): 90 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 15;51;53.ri
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

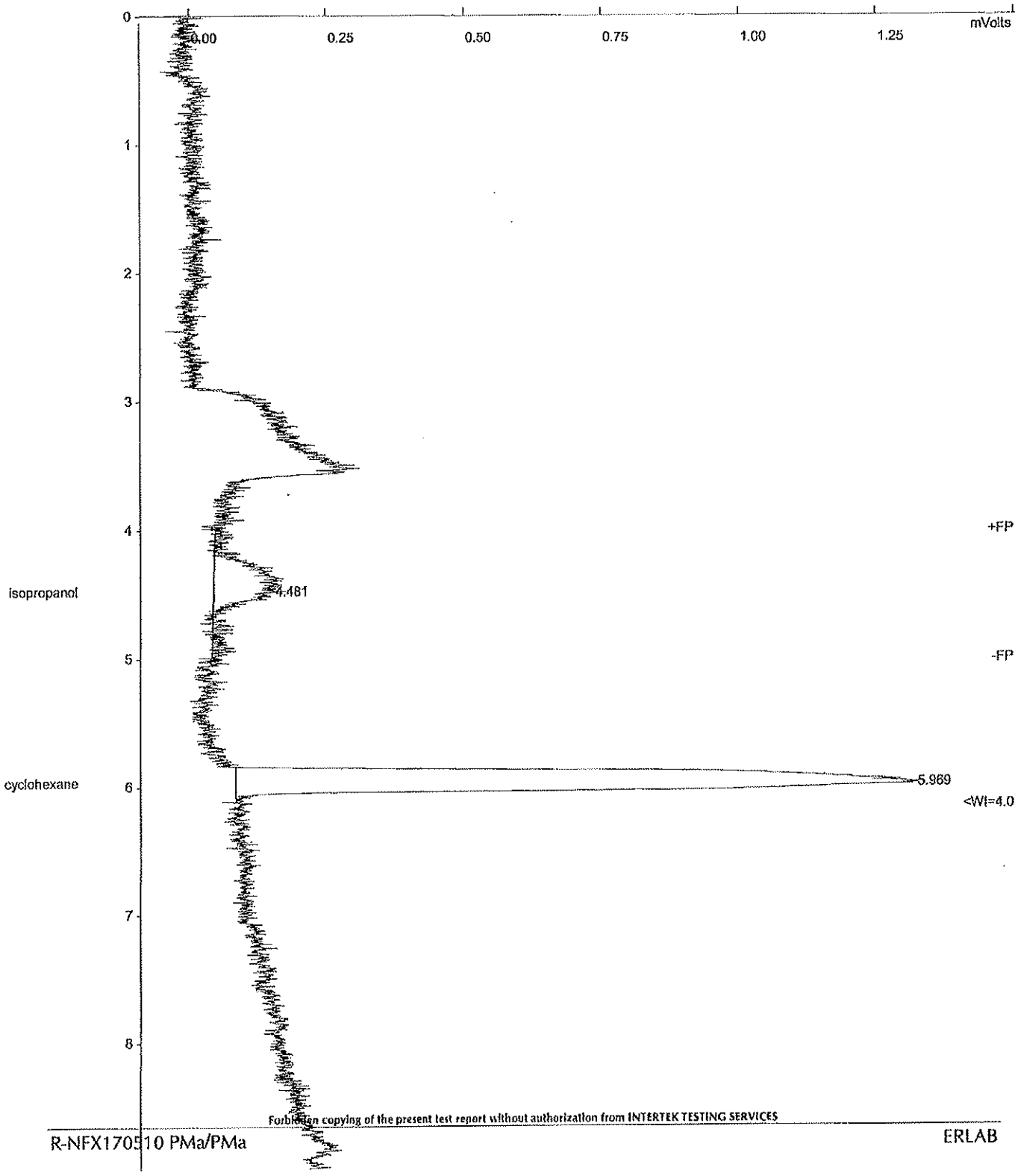
Injection Date: 02/06/2010 15:51 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 6 Zero Offset = 6%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



98/171

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 15;51;53.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 15:51 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	16.8445	4.481	0.091	2241	BB	13.5	
2	cyclohexane	83.1555	5.969	0.089	11063	BB	9.7	
	Totals:	100.0000		0.180	13304			

Total Unidentified Counts : 0 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 2 microVolts

Noise (used): 74 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 16;16;44.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

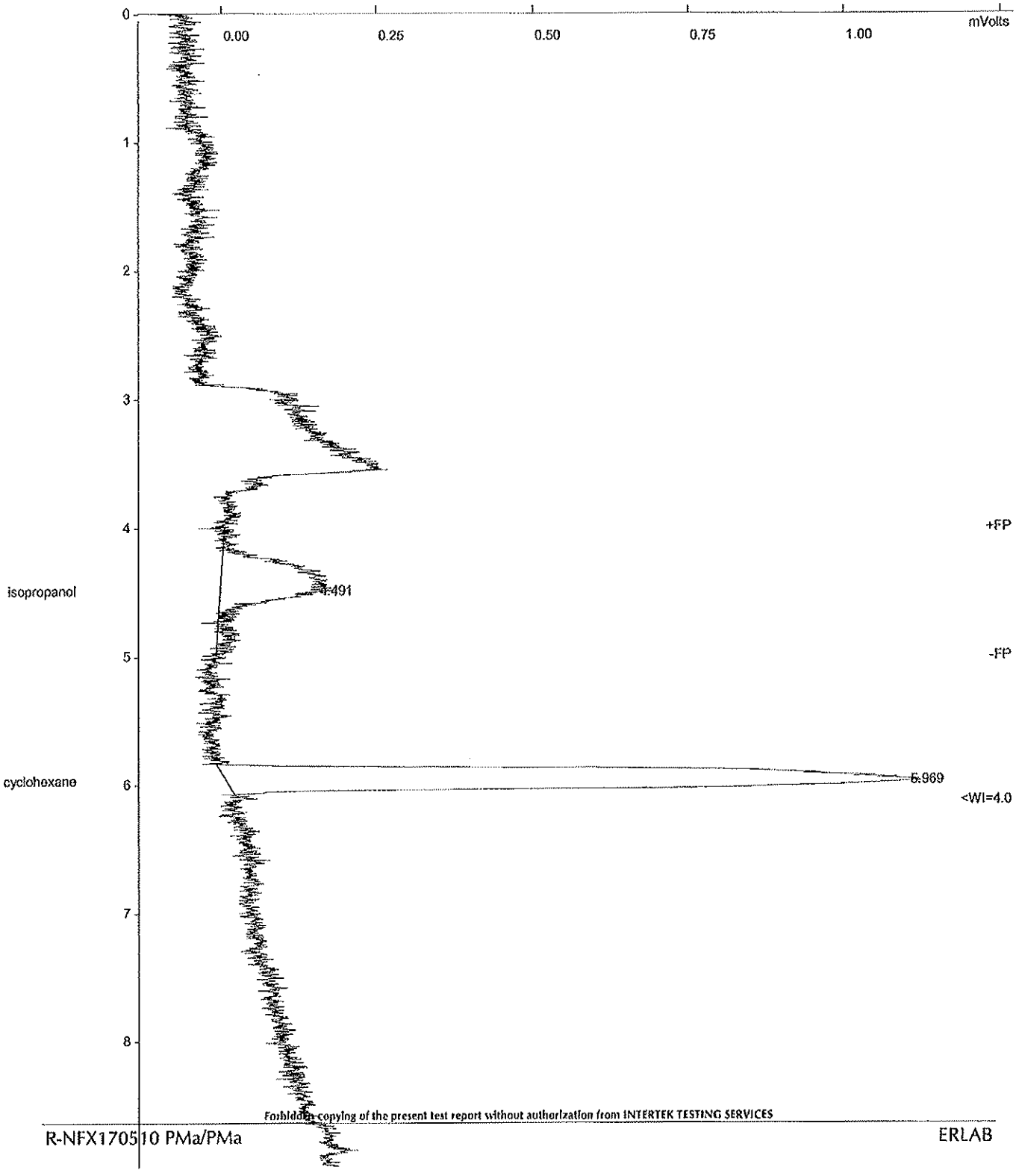
Injection Date: 02/06/2010 16:16 Calculation Date: 04/06/2010 11:18

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 5 Zero Offset = 10%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 16;16;44.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 16:16 Calculation Date: 04/06/2010 11:18

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	24.4967	4.491	0.101	3248	BB	16.2	
2	cyclohexane	75.5033	5.969	0.089	10011	BB	9.9	
	Totals:	100.0000		0.190	13259			

Total Unidentified Counts : 0 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -59 microVolts

Noise (used): 86 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 16;41;39.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

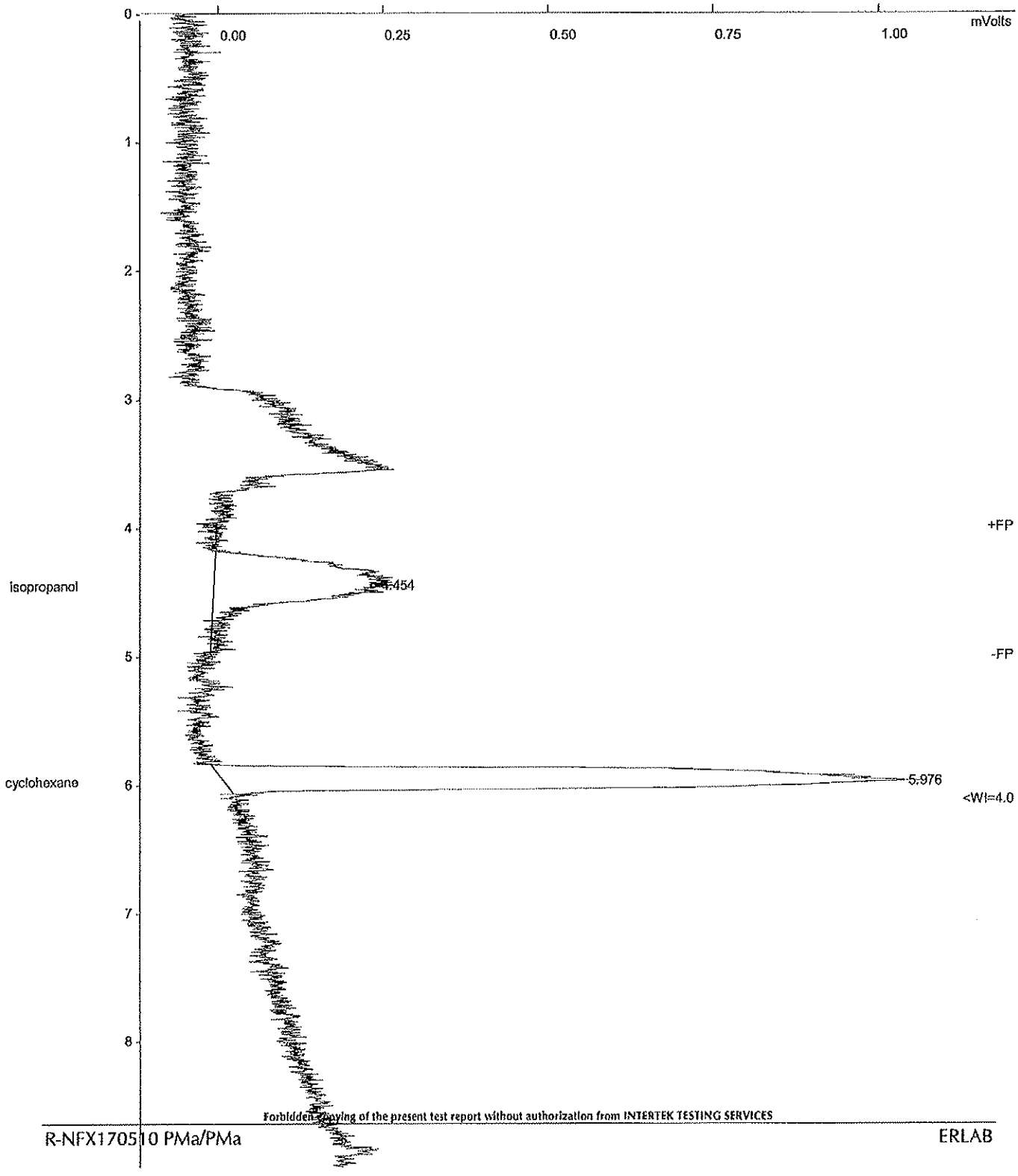
Injection Date: 02/06/2010 16:41 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 5 Zero Offset = 9%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 16;41;39.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 16:41 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	35.0428	4.454	0.064	4883	BB	18.5	
2	cyclohexane	64.9572	5.976	0.096	9052	BB	9.7	
	Totals:	100.0000		0.160	13935			

Total Unidentified Counts : 0 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -33 microVolts

Noise (used): 88 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 17;06;32.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

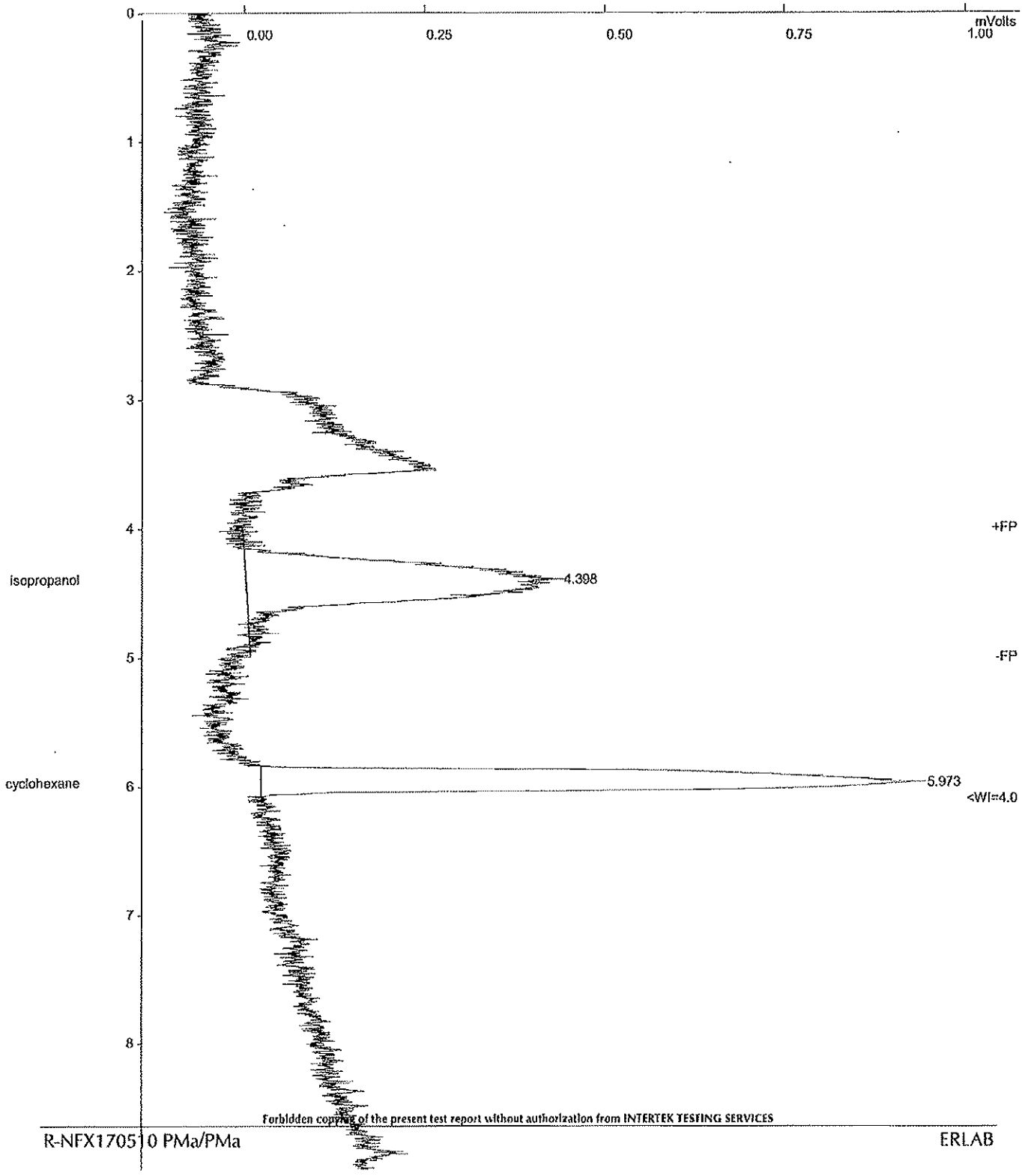
Injection Date: 02/06/2010 17:06 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 4 Zero Offset = 14%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 17;06;32.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 17:06 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	48.6908	4.398	0.008	7540	BB	17.8	
2	cyclohexane	51.3092	5.973	0.093	7946	BB	9.1	
	Totals:	100.0000		0.101	15486			

Total Unidentified Counts : 0 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -61 microVolts

Noise (used): 86 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 17;31;26.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

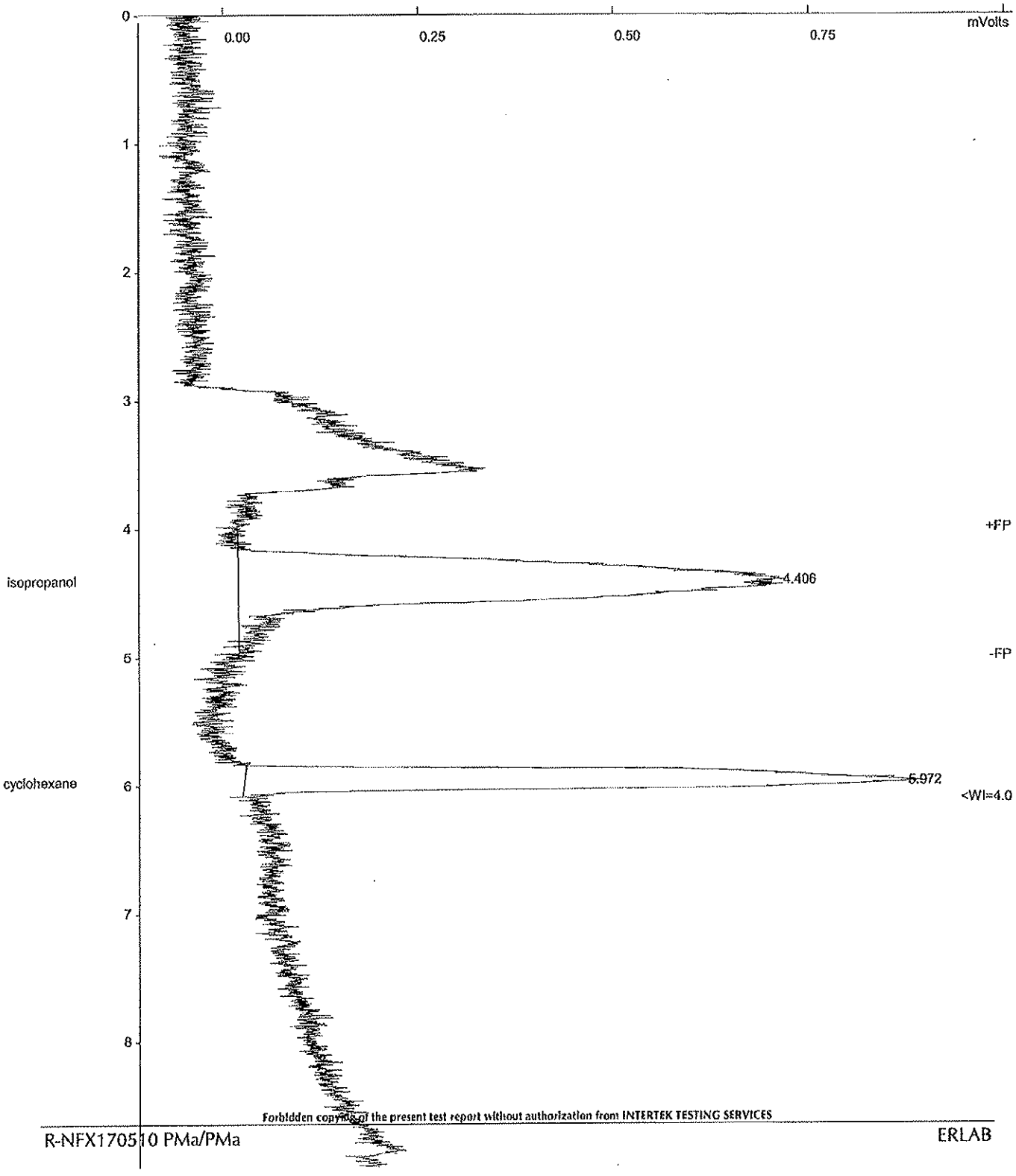
Injection Date: 02/06/2010 17:31 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 4 Zero Offset = 11%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\02-06-2010 sortie 17;31;26.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 02/06/2010 17:31 Calculation Date: 03/06/2010 15:13

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	isopropanol	62.9501	4.406	0.016	12840	BB	18.5	
2	cyclohexane	37.0498	5.972	0.092	7557	BB	9.0	
	Totals:	99.9999		0.108	20397			

Total Unidentified Counts : 0 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 2

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -67 microVolts

Noise (used): 64 microVolts - monitored before this run

Manual injection

****

RELATIVE HUMIDITY AND TEMPERATURES DATA TABLE

ISOPROPANOL TEST

See attached documents.

Testo 175-H2 38215624 (isopropanol test, inside the enclosure)

Date	Time	[%HR]	[°C]
02/06/2010	11:00:00	43,5	25,0
02/06/2010	11:30:00	44,5	25,6
02/06/2010	12:00:00	43,6	26,1
02/06/2010	12:30:00	43,0	26,4
02/06/2010	13:00:00	42,4	26,7
02/06/2010	13:30:00	41,8	26,9
02/06/2010	14:00:00	41,3	27,1
02/06/2010	14:30:00	41,0	27,3
02/06/2010	15:00:00	40,7	27,5
02/06/2010	15:30:00	40,4	27,7
02/06/2010	16:00:00	40,0	27,9
02/06/2010	16:30:00	39,8	28,1
02/06/2010	17:00:00	39,4	28,3
02/06/2010	17:30:00	39,1	28,4

Testo 175-H2 38215782 (isopropanol test, outside the enclosure)

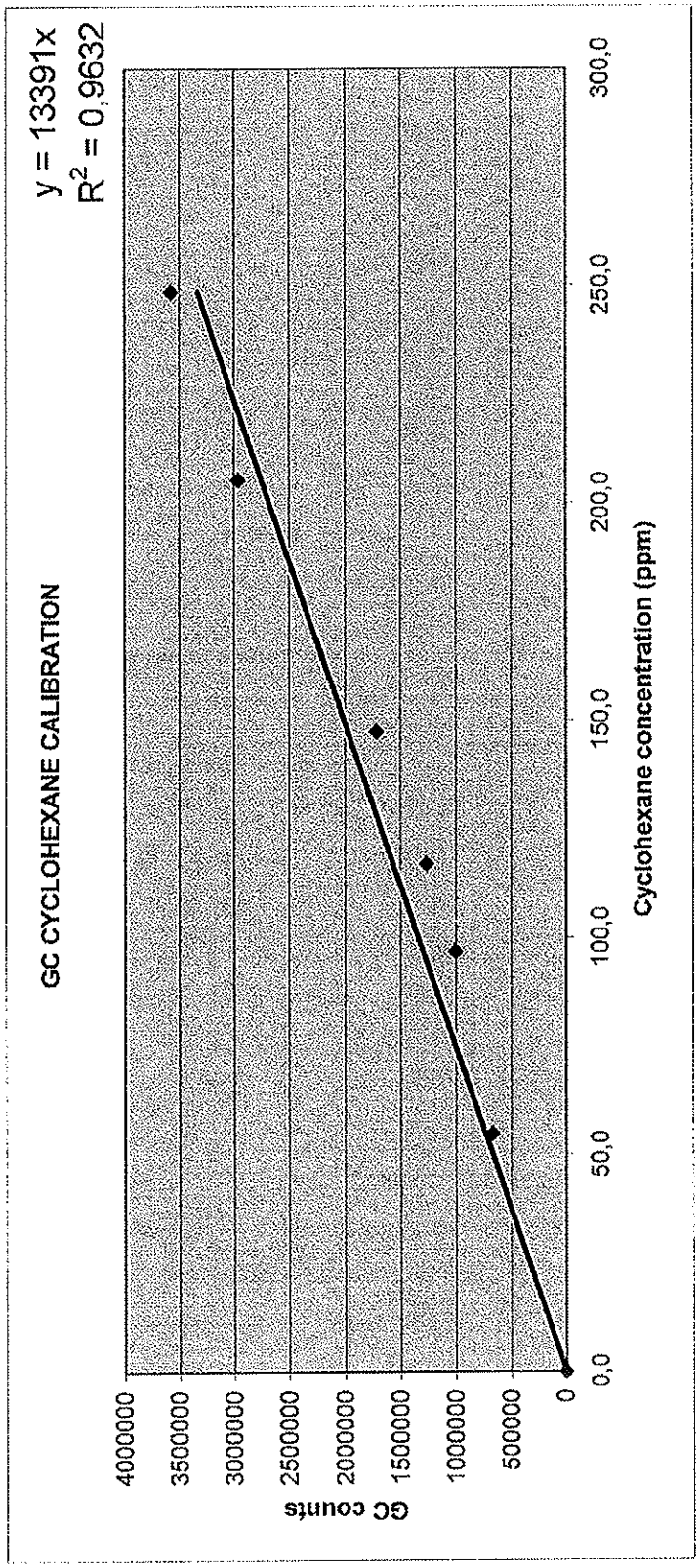
Date	Time	[%HR]	[°C]
02/06/2010	11:00:00	46,2	24,4
02/06/2010	11:30:00	46,3	25,3
02/06/2010	12:00:00	45,7	25,8
02/06/2010	12:30:00	45,2	26,0
02/06/2010	13:00:00	44,7	26,3
02/06/2010	13:30:00	44,2	26,5
02/06/2010	14:00:00	43,9	26,6
02/06/2010	14:30:00	43,5	26,8
02/06/2010	15:00:00	43,2	27,0
02/06/2010	15:30:00	42,8	27,2
02/06/2010	16:00:00	42,4	27,4
02/06/2010	16:30:00	42,2	27,6
02/06/2010	17:00:00	41,9	27,8
02/06/2010	17:30:00	41,4	27,9

CALIBRATION CURVE AND CHROMATOGRAMS

CYCLOHEXANE CALIBRATION

See attached documents.

evaporation flow rate (g/min)	concentration (ppm)	GC counts
0,76	55,0	675812
1,62	117,2	1265635
1,34	96,9	1004872
2,04	147,5	1716644
3,44	248,8	3579448
0	0,0	3920
2,84	205,4	2962909



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\31-05-2010 sortie 16;16;27.ru
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth **111/171**
Sample ID : sortie

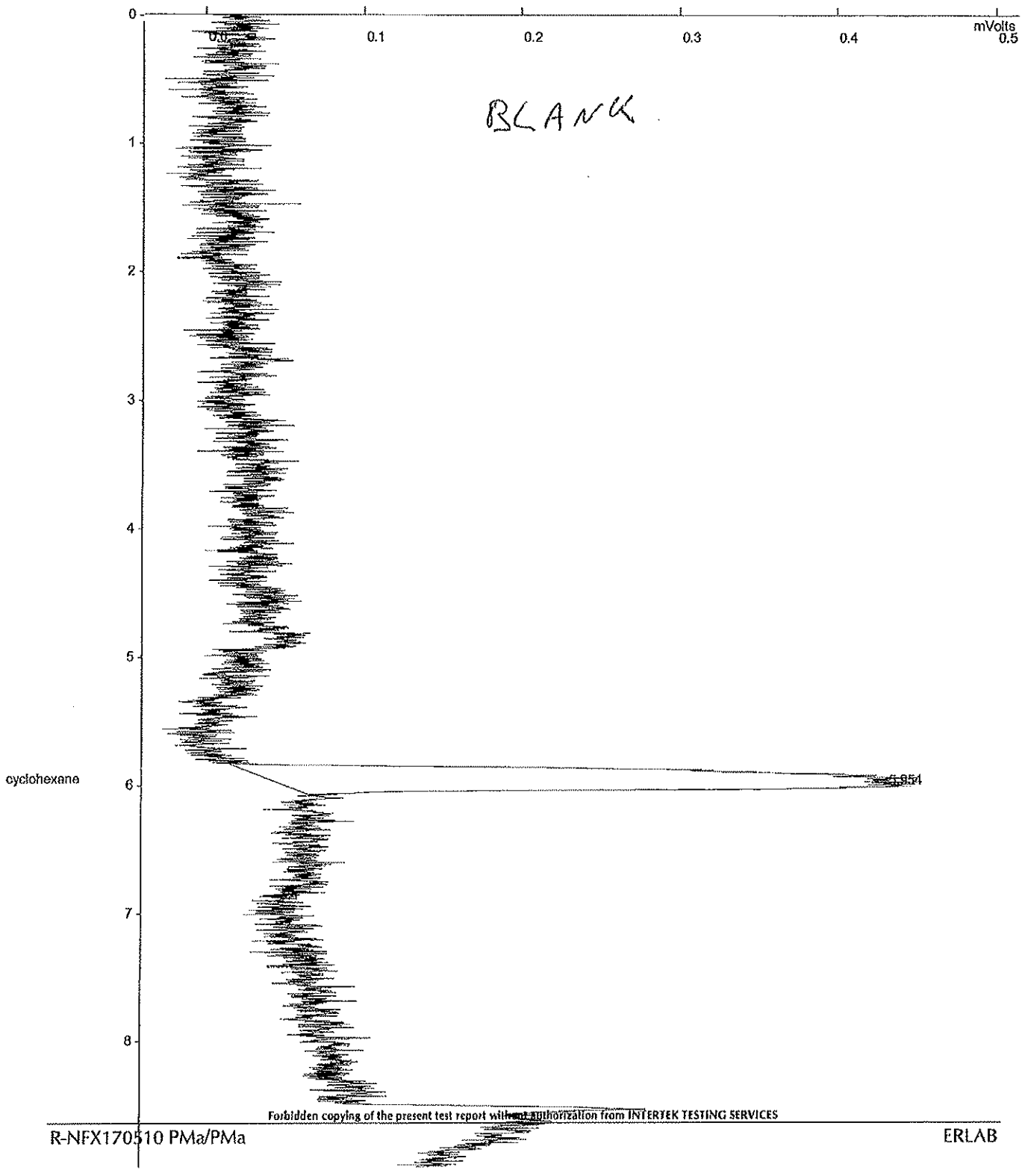
Injection Date: 31/05/2010 16:16 Calculation Date: 31/05/2010 16:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 2 Zero Offset = 8%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\31-05-2010 sortie 16;16;27.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 31/05/2010 16:16 Calculation Date: 31/05/2010 16:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.954	0.074	3920	BB	10.6	
	Totals:	100.0000		0.074	3920			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 12 microVolts

Noise (used): 73 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 14;47;54.r
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

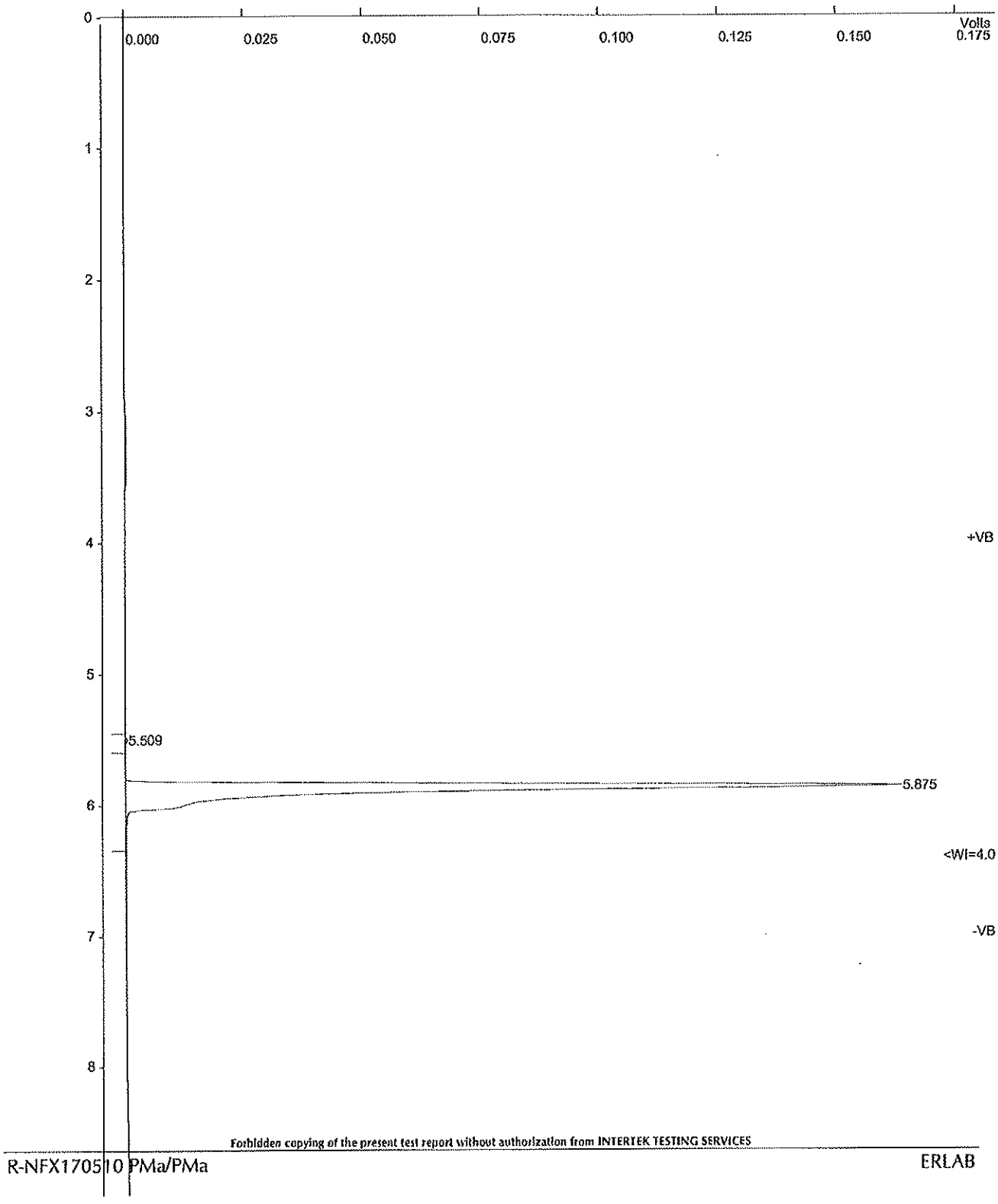
Injection Date: 18/05/2010 14:47 Calculation Date: 18/05/2010 14:56

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 772 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.993 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 14;47;54.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 18/05/2010 14:47 Calculation Date: 18/05/2010 14:56

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		0.1268	5.509	0.000	858	BB	1.9	
2		99.8732	5.875	0.000	675812	BB	3.2	
	Totals:	100.0000		0.000	676670			

Total Unidentified Counts : 676670 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 0

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -63 microVolts

Noise (used): 41 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 15;35;21.rt
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

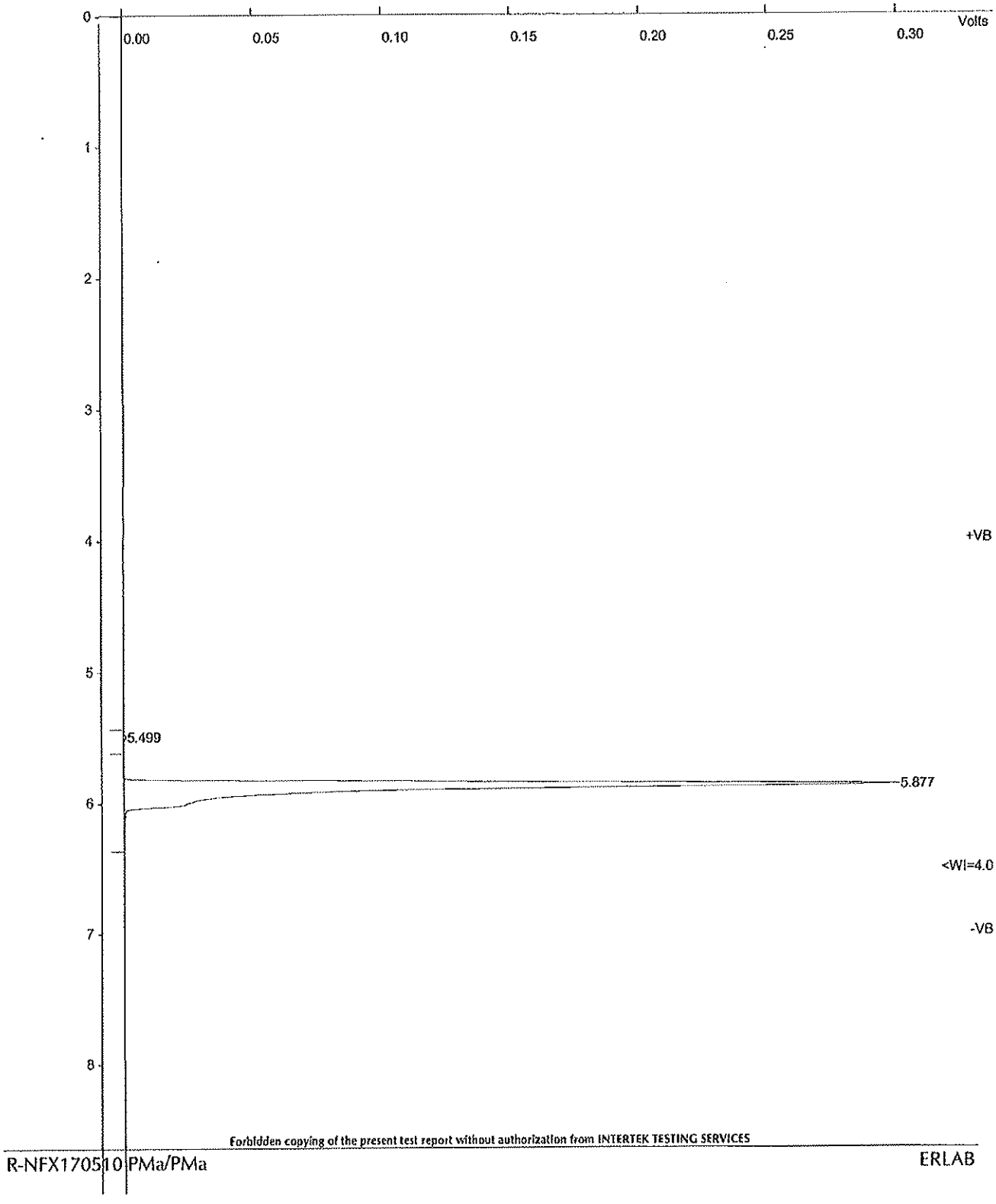
Injection Date: 18/05/2010 15:35 Calculation Date: 18/05/2010 15:44

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1420 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 15;35;21.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 18/05/2010 15:35 Calculation Date: 18/05/2010 15:44

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		0.1515	5.499	0.000	1920	BB	1.9	
2		99.8485	5.877	0.000	1265635	BB	3.2	
	Totals:	100.0000		0.000	1267555			

Total Unidentified Counts : 1267555 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 0

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -62 microVolts

Noise (used): 48 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 15;59;06.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

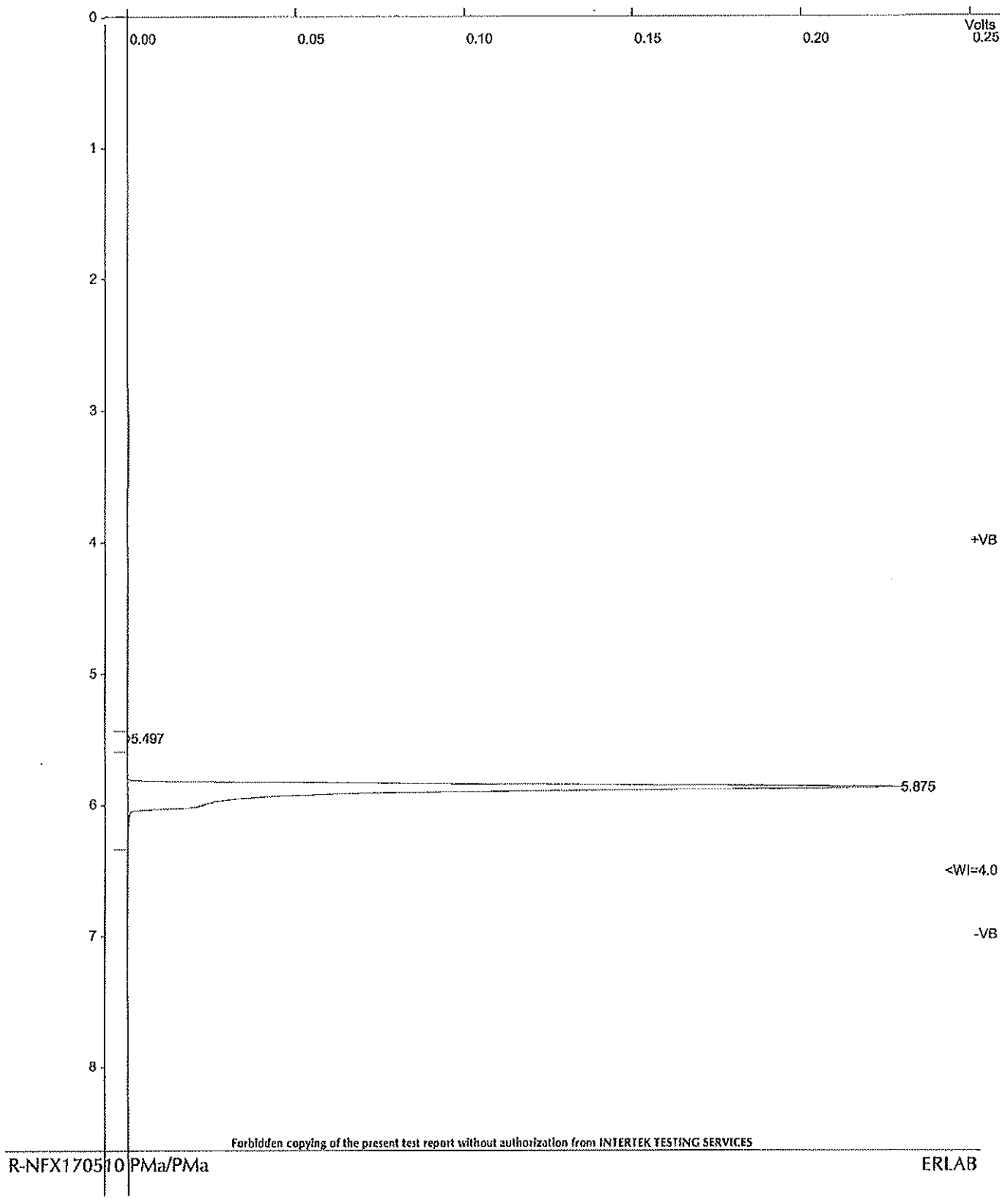
Injection Date: 18/05/2010 15:59 Calculation Date: 18/05/2010 16:08

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1087 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 15;59;06.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 18/05/2010 15:59 Calculation Date: 18/05/2010 16:08

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		0.1319	5.497	0.000	1328	BB	1.9	
2		99.8681	5.875	0.000	1004872	BB	3.3	
	Totals:	100.0000		0.000	1006200			

Total Unidentified Counts : 1006199 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 0

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -60 microVolts

Noise (used): 30 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 16;46;46.ri
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

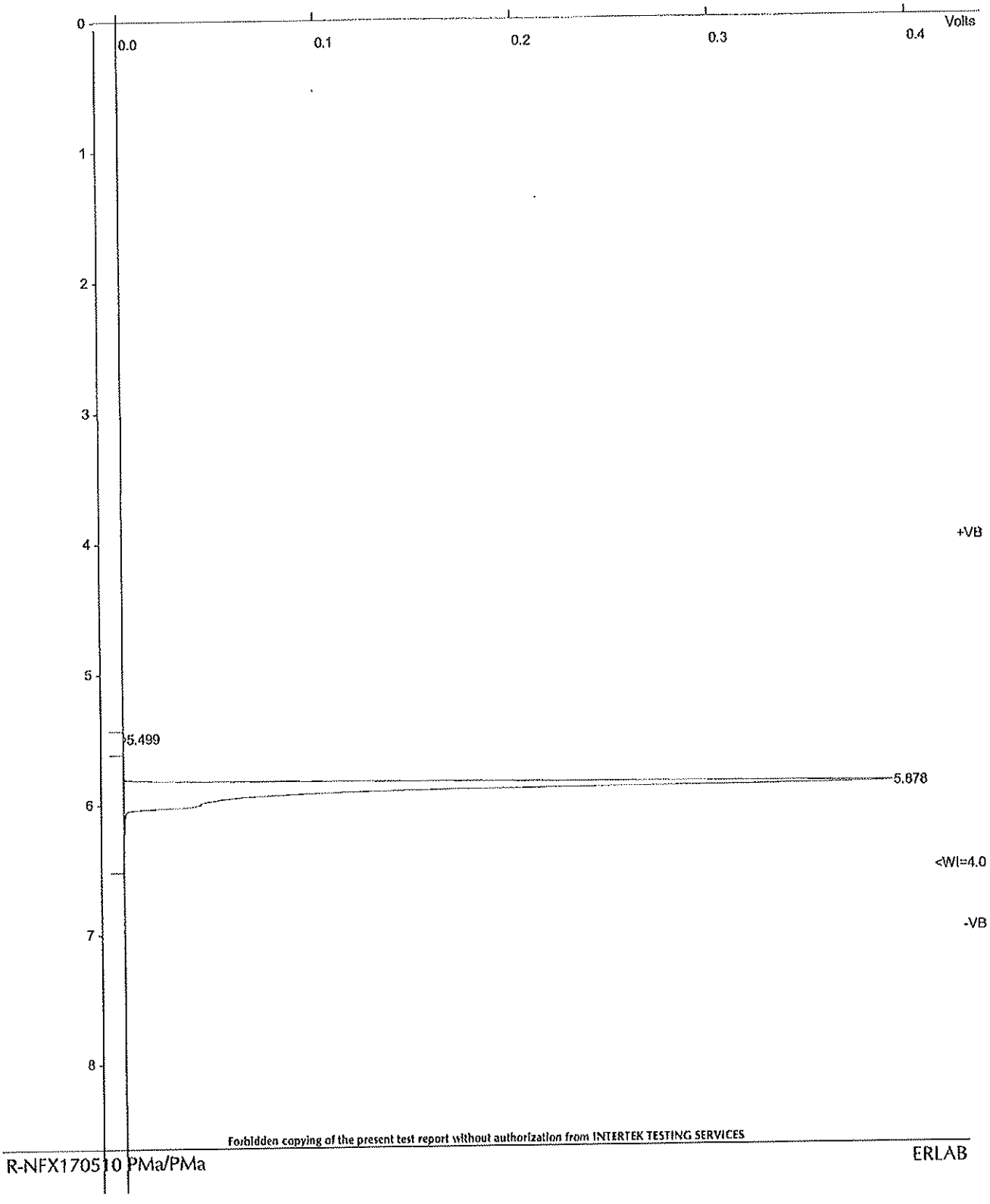
Injection Date: 18/05/2010 16:46 Calculation Date: 18/05/2010 16:55

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1842 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.993 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\18-05-2010 entree 16;46;46.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 18/05/2010 16:46 Calculation Date: 18/05/2010 16:55

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		0.1323	5.499	0.000	2275	BB	1.9	
2		99.8677	5.878	0.000	1716644	BB	3.3	
	Totals:	100.0000		0.000	1718919			

Total Unidentified Counts : 1718919 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 0

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -52 microVolts

Noise (used): 36 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\test intertek 0510\19-05-2010 entree 14;46;32.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : entree

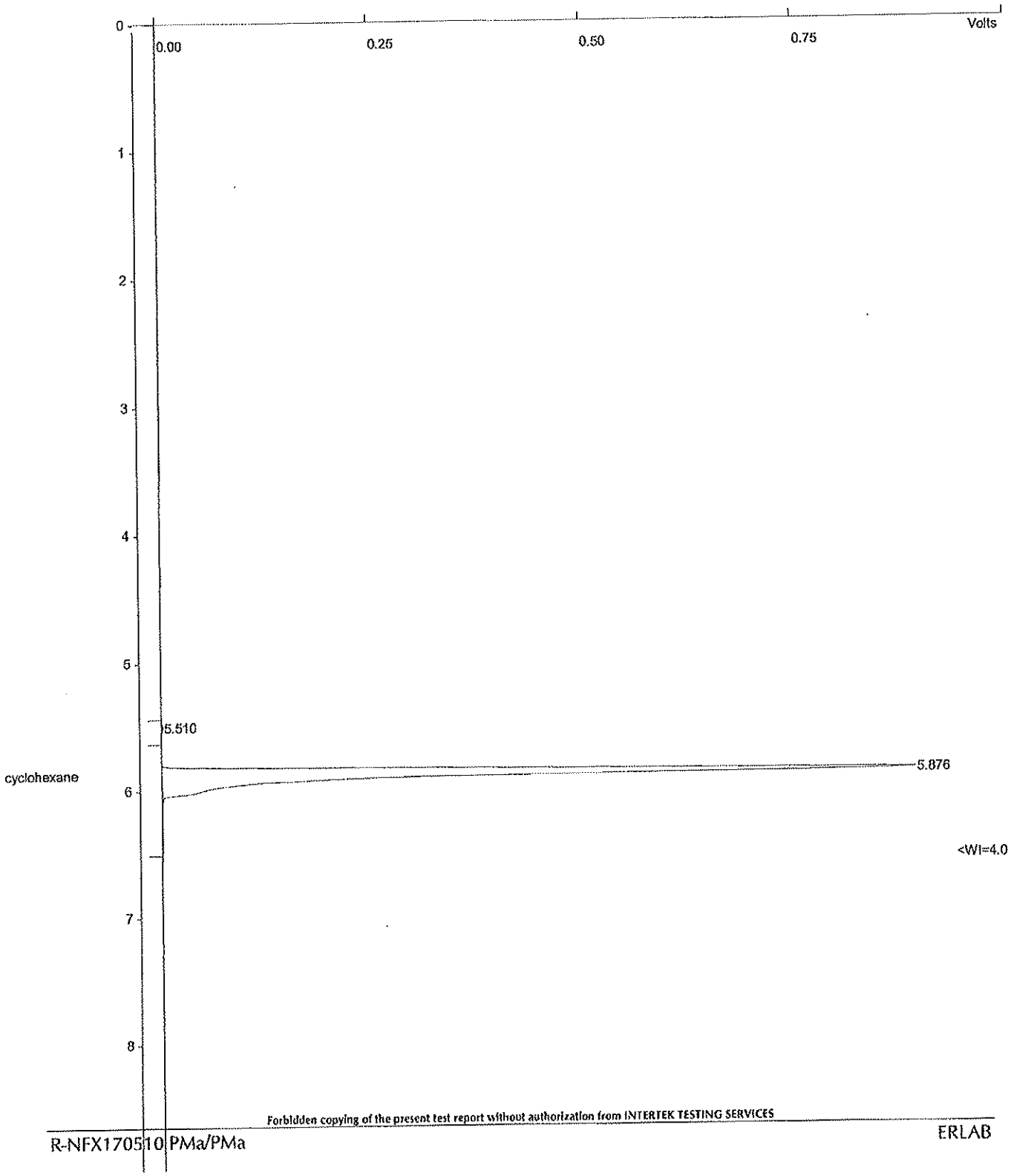
Injection Date: 19/05/2010 14:46 Calculation Date: 19/05/2010 16:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 4204 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.993 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\test intertek 0510\19-05-2010 entree 14;46;32.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : entree

Injection Date: 19/05/2010 14:46 Calculation Date: 19/05/2010 16:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.993 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		0.1140	5.510	0.000	4084	BV	1.9	
2	cyclohexane	99.8860	5.876	-0.004	3579448	VB	3.2	
	Totals:	100.0000		-0.004	3583532			

Total Unidentified Counts : 4084 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -59 microVolts

Noise (used): 44 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 entree 16;55;44.ru
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth

Sample ID : entree

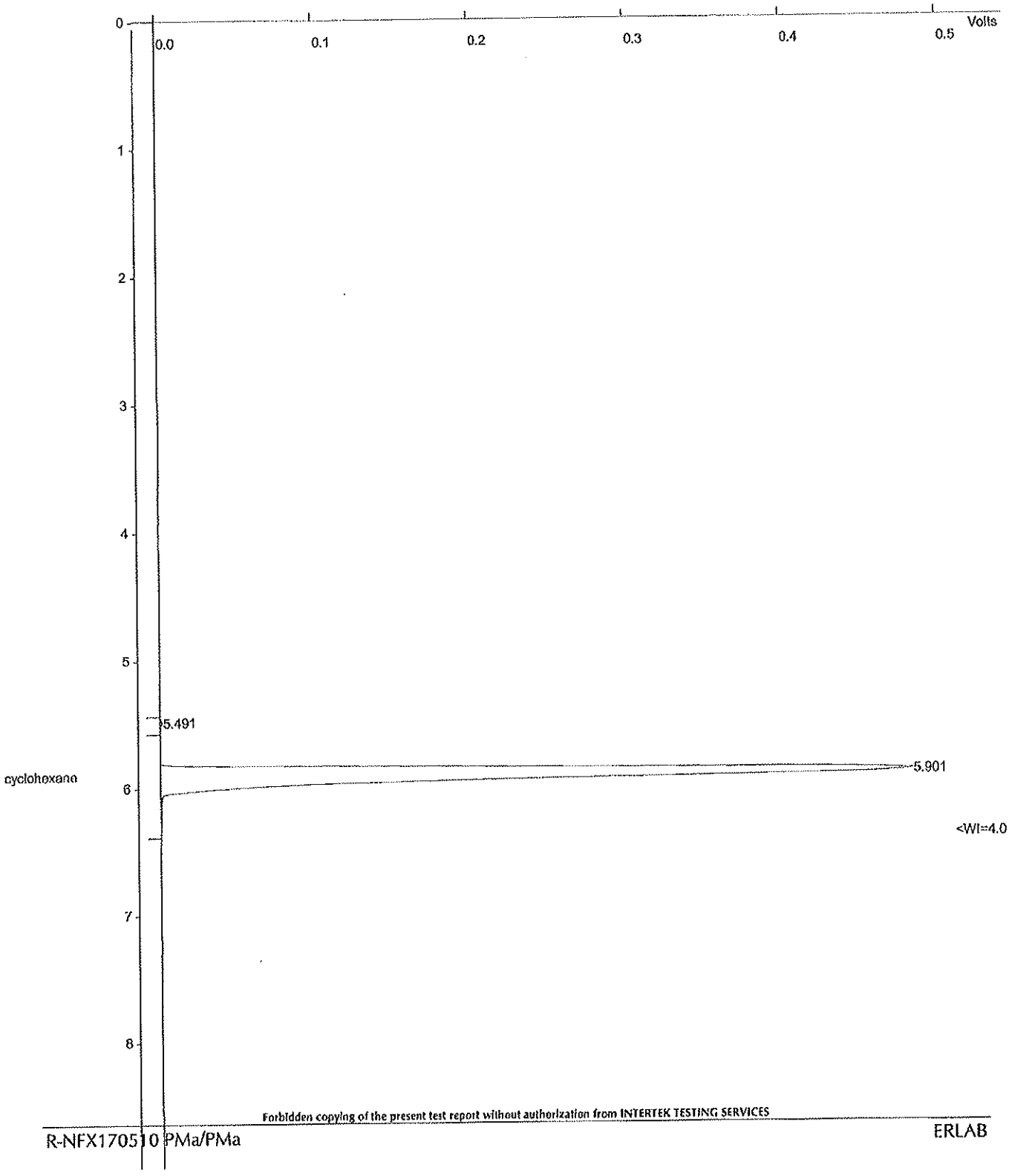
Injection Date: 01/06/2010 16:55 Calculation Date: 01/06/2010 17:04

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 2284 Zero Offset = 2%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 entree 16;55;44.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : entree

Injection Date: 01/06/2010 16:55 Calculation Date: 01/06/2010 17:04

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		0.0820	5.491	0.000	2433	BV	1.9	
2	cyclohexane	99.9180	5.901	0.021	2962909	VB	5.7	
	Totals:	100.0000		0.021	2965342			

Total Unidentified Counts : 2433 counts

Detected Peaks: 2 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 20 microVolts

Noise (used): 86 microVolts - monitored before this run

Manual injection

****

WEIGHT DATA TABLE AND CHROMATOGRAMS

CYCLOHEXANE TEST

See attached documents.

WEIGHT DATA TABLE : CYCLOHEXANE TEST

time	weight (g)	evaporation rate (g/min)	total evaporation (g)
09:26:26	0,4		0,4
09:27:26	2,7	2,3	2,7
09:28:26	5,6	2,9	5,6
09:29:26	8,3	2,7	8,3
09:30:26	11,2	2,9	11,2
09:31:26	14,1	2,9	14,1
09:32:26	16,6	2,5	16,6
09:33:26	19,8	3,2	19,8
09:34:26	22,9	3,1	22,9
09:35:26	26	3,1	26
09:36:26	28,9	2,9	28,9
09:37:26	32,3	3,4	32,3
09:38:26	35,4	3,1	35,4
09:39:26	38,1	2,7	38,1
09:40:26	41,2	3,1	41,2
09:41:25	44,2	3	44,2
09:42:26	46,9	2,7	46,9
09:43:26	49,9	3	49,9
09:44:26	52,8	2,9	52,8
09:45:26	55,7	2,9	55,7
09:46:26	58,7	3	58,7
09:47:25	61,5	2,8	61,5
09:48:26	63,7	2,2	63,7
09:49:26	66,7	3	66,7
09:50:25	69,7	3	69,7
09:51:26	72,6	2,9	72,6
09:52:26	75,1	2,5	75,1
09:53:26	78	2,9	78
09:54:26	81,1	3,1	81,1
09:55:26	83,8	2,7	83,8
09:56:26	86,8	3	86,8
09:57:25	89,7	2,9	89,7
09:58:26	92	2,3	92
09:59:26	95,1	3,1	95,1
10:00:25	98	2,9	98
10:01:26	100,9	2,9	100,9
10:02:26	103,9	3	103,9
10:03:25	106,8	2,9	106,8
10:04:25	109,8	3	109,8
10:05:26	112,7	2,9	112,7
10:06:26	115,5	2,8	115,5
10:07:25	118,3	2,8	118,3
10:08:25	121,2	2,9	121,2
10:09:25	124,2	3	124,2
10:10:25	127,1	2,9	127,1
10:11:25	130,1	3	130,1
10:12:25	132,9	2,8	132,9
10:13:26	135,9	3	135,9
10:14:25	138,8	2,9	138,8
10:15:25	141,7	2,9	141,7
10:16:25	144,7	3	144,7
10:17:25	147,6	2,9	147,6
10:18:25	150,6	3	150,6

10:19:25	153,3	2,7	153,3
10:20:25	156	2,7	156
10:21:25	158,9	2,9	158,9
10:22:25	161,9	3	161,9
10:23:25	164,7	2,8	164,7
10:24:25	167,5	2,8	167,5
10:25:25	170,4	2,9	170,4
10:26:25	173,3	2,9	173,3
10:27:25	176,3	3	176,3
10:28:25	179,2	2,9	179,2
10:29:25	182,1	2,9	182,1
10:30:25	185,1	3	185,1
10:31:25	188	2,9	188
10:32:25	191	3	191
10:33:25	193,9	2,9	193,9
10:34:25	196,9	3	196,9
10:35:25	199,9	3	199,9
10:36:25	202,3	2,4	202,3
10:37:25	205,1	2,8	205,1
10:38:25	208,1	3	208,1
10:39:25	211,1	3	211,1
10:40:25	214,1	3	214,1
10:41:25	217	2,9	217
10:42:25	220	3	220
10:43:25	223	3	223
10:44:25	225,9	2,9	225,9
10:45:25	228,4	2,5	228,4
10:46:25	231,1	2,7	231,1
10:47:25	234	2,9	234
10:48:25	236,9	2,9	236,9
10:49:25	239,7	2,8	239,7
10:50:25	242,6	2,9	242,6
10:51:25	245,5	2,9	245,5
10:52:25	248,3	2,8	248,3
10:53:25	251,2	2,9	251,2
10:54:25	254,1	2,9	254,1
10:55:25	257	2,9	257
10:56:25	259,8	2,8	259,8
10:57:25	262,5	2,7	262,5
10:58:25	265,4	2,9	265,4
10:59:25	268,3	2,9	268,3
11:00:25	271,1	2,8	271,1
11:01:25	274,1	3	274,1
11:02:25	277	2,9	277
11:03:25	279,5	2,5	279,5
11:04:25	282,5	3	282,5
11:05:25	285,5	3	285,5
11:06:25	288,3	2,8	288,3
11:07:25	291	2,7	291
11:08:25	293,8	2,8	293,8
11:09:25	296,6	2,8	296,6
11:10:25	299,3	2,7	299,3
11:11:25	301,9	2,6	301,9
11:12:25	304,7	2,8	304,7
11:13:25	307,5	2,8	307,5
11:14:25	309,8	2,3	309,8

11:15:25	312,7	2,9	312,7
11:16:25	315,5	2,8	315,5
11:17:25	318,3	2,8	318,3
11:18:25	321,1	2,8	321,1
11:19:25	323,7	2,6	323,7
11:20:25	326,6	2,9	326,6
11:21:25	329,3	2,7	329,3
11:22:25	332,2	2,9	332,2
11:23:25	334,4	2,2	334,4
11:24:25	337,3	2,9	337,3
11:25:25	340,2	2,9	340,2
11:26:25	342,9	2,7	342,9
11:27:25	345,8	2,9	345,8
11:28:25	348,6	2,8	348,6
11:29:24	351	2,4	351
11:30:24	353,8	2,8	353,8
11:31:25	356,7	2,9	356,7
11:32:25	359,5	2,8	359,5
11:33:25	362,4	2,9	362,4
11:34:25	364,8	2,4	364,8
11:35:25	367,7	2,9	367,7
11:36:25	370,5	2,8	370,5
11:37:24	373,3	2,8	373,3
11:38:25	376,2	2,9	376,2
11:39:25	379,1	2,9	379,1
11:40:25	381,9	2,8	381,9
11:41:24	384,3	2,4	384,3
11:42:25	387,2	2,9	387,2
11:43:25	390	2,8	390
11:44:24	392,9	2,9	392,9
11:45:24	395,8	2,9	395,8
11:46:25	398,6	2,8	398,6
11:47:25	401,5	2,9	401,5
11:48:24	403,5	2	403,5
11:49:25	406,5	3	406,5
11:50:25	409,4	2,9	409,4
11:51:25	412,3	2,9	412,3
11:52:24	415,2	2,9	415,2
11:53:24	417,4	2,2	417,4
11:54:25	420,4	3	420,4
11:55:25	423,3	2,9	423,3
11:56:24	426,2	2,9	426,2
11:57:24	429,1	2,9	429,1
11:58:25	432	2,9	432
11:59:25	434,9	2,9	434,9
12:00:24	437,3	2,4	437,3
12:01:24	440,3	3	440,3
12:02:25	443,2	2,9	443,2
12:03:24	446,1	2,9	446,1
12:04:24	449	2,9	449
12:05:24	451,9	2,9	451,9
12:06:24	454,8	2,9	454,8
12:07:25	457	2,2	457
12:08:24	460	3	460
12:09:24	462,9	2,9	462,9
12:10:24	465,8	2,9	465,8

12:11:24	468,2	2,4	468,2
12:12:24	471,2	3	471,2
12:13:24	474,2	3	474,2
12:14:24	477,1	2,9	477,1
12:15:24	480	2,9	480
12:16:25	482,9	2,9	482,9
12:17:24	485,9	3	485,9
12:18:25	488,5	2,6	488,5
12:19:24	491,4	2,9	491,4
12:20:24	494,3	2,9	494,3
12:21:24	497,3	3	497,3
12:22:24	500,2	2,9	500,2
12:23:24	502,7	2,5	502,7
12:24:24	505,7	3	505,7
12:25:24	508,6	2,9	508,6
12:26:24	511,6	3	511,6
12:27:24	514,5	2,9	514,5
12:28:24	517,5	3	517,5
12:29:24	519,8	2,3	519,8
12:30:24	522,8	3	522,8
12:31:24	525,8	3	525,8
12:32:24	528,8	3	528,8
12:33:24	531,7	2,9	531,7
12:34:24	533,9	2,2	533,9
12:35:24	536,8	2,9	536,8
12:36:24	539,8	3	539,8
12:37:24	542,5	2,7	542,5
12:38:24	545,5	3	545,5
12:39:24	548,5	3	548,5
12:40:24	551,5	3	551,5
12:41:24	554,2	2,7	554,2
12:42:24	557,2	3	557,2
12:43:24	560,2	3	560,2
12:44:24	563,2	3	563,2
12:45:24	566,1	2,9	566,1
12:46:24	568,6	2,5	568,6
12:47:24	571,5	2,9	571,5
12:48:24	574,5	3	574,5
12:49:24	577,3	2,8	577,3
12:50:24	580,3	3	580,3
12:51:24	582,8	2,5	582,8
12:52:24	585,7	2,9	585,7
12:53:24	588,6	2,9	588,6
12:54:24	591,5	2,9	591,5
12:55:24	594,5	3	594,5
12:56:24	597,4	2,9	597,4
12:57:24	600,3	2,9	600,3
12:58:24	603,3	3	603,3
12:59:24	606,1	2,8	606,1
13:00:24	609	2,9	609
13:01:24	612	3	612
13:02:24	614,9	2,9	614,9
13:03:24	617,8	2,9	617,8
13:04:24	620,3	2,5	620,3
13:05:24	623,3	3	623,3
13:06:24	626,3	3	626,3

13:07:24	629,2	2,9	629,2
13:08:24	632,2	3	632,2
13:09:24	635	2,8	635
13:10:24	637,9	2,9	637,9
13:11:24	640,9	3	640,9
13:12:24	643,8	2,9	643,8
13:13:24	646,8	3	646,8
13:14:24	649,7	2,9	649,7
13:15:24	652,6	2,9	652,6
13:16:24	655,5	2,9	655,5
13:17:24	658,5	3	658,5
13:18:24	661,4	2,9	661,4
13:19:23	664,4	3	664,4
13:20:24	667,1	2,7	667,1
13:21:24	669,9	2,8	669,9
13:22:24	672,7	2,8	672,7
13:23:24	675,5	2,8	675,5
13:24:24	677,5	2	677,5
13:25:23	680,4	2,9	680,4
13:26:24	683,1	2,7	683,1
13:27:24	686	2,9	686
13:28:23	688,7	2,7	688,7
13:29:24	691,6	2,9	691,6
13:30:24	694,4	2,8	694,4
13:31:24	697,1	2,7	697,1
13:32:23	699,9	2,8	699,9
13:33:24	702,7	2,8	702,7
13:34:24	705,4	2,7	705,4
13:35:24	708,1	2,7	708,1
13:36:23	710,8	2,7	710,8
13:37:24	713,7	2,9	713,7
13:38:24	716,4	2,7	716,4
13:39:24	719,2	2,8	719,2
13:40:23	721,9	2,7	721,9
13:41:23	724,6	2,7	724,6
13:42:24	727,4	2,8	727,4
13:43:23	730,2	2,8	730,2
13:44:24	732,9	2,7	732,9
13:45:24	735,7	2,8	735,7
13:46:23	738,5	2,8	738,5
13:47:23	741,2	2,7	741,2
13:48:24	743,8	2,6	743,8
13:49:23	746,6	2,8	746,6
13:50:23	749,4	2,8	749,4
13:51:23	752,3	2,9	752,3
13:52:23	755	2,7	755
13:53:24	757,8	2,8	757,8
13:54:24	760,5	2,7	760,5
13:55:23	763,2	2,7	763,2
13:56:23	766	2,8	766
13:57:23	768,8	2,8	768,8
13:58:24	771,6	2,8	771,6
13:59:23	774,4	2,8	774,4
14:00:23	777,2	2,8	777,2
14:01:23	780	2,8	780
14:02:24	782,7	2,7	782,7

14:03:23	785,3	2,6	785,3
14:04:23	788,1	2,8	788,1
14:05:23	790,9	2,8	790,9
14:06:23	793,7	2,8	793,7
14:07:24	796,5	2,8	796,5
14:08:23	799,3	2,8	799,3
14:09:23	802,2	2,9	802,2
14:10:24	805	2,8	805
14:11:23	807,7	2,7	807,7
14:12:23	810,5	2,8	810,5
14:13:23	813,2	2,7	813,2
14:14:23	815,8	2,6	815,8
14:15:23	818,7	2,9	818,7
14:16:23	821,4	2,7	821,4
14:17:23	824,2	2,8	824,2
14:18:23	827	2,8	827
14:19:23	829,6	2,6	829,6
14:20:23	832,4	2,8	832,4
14:21:23	835,1	2,7	835,1
14:22:23	837,9	2,8	837,9
14:23:23	840,6	2,7	840,6
14:24:23	843,5	2,9	843,5
14:25:23	846,2	2,7	846,2
14:26:23	849,1	2,9	849,1
14:27:23	851,9	2,8	851,9
14:28:23	854,7	2,8	854,7
14:29:23	857,5	2,8	857,5
14:30:23	860,2	2,7	860,2
14:31:23	863,1	2,9	863,1
14:32:23	865,8	2,7	865,8
14:33:23	868,6	2,8	868,6
14:34:23	871,3	2,7	871,3
14:35:23	874,1	2,8	874,1
14:36:23	876,8	2,7	876,8
14:37:23	879,5	2,7	879,5
14:38:23	882,3	2,8	882,3
14:39:23	885,1	2,8	885,1
14:40:23	887,9	2,8	887,9
14:41:23	890,7	2,8	890,7
14:42:23	893,6	2,9	893,6
14:43:23	896,3	2,7	896,3
14:44:23	899	2,7	899
14:45:23	901,7	2,7	901,7
14:46:23	904,5	2,8	904,5
14:47:23	907,2	2,7	907,2
14:48:23	909,9	2,7	909,9
14:49:23	912,7	2,8	912,7
14:50:23	915,5	2,8	915,5
14:51:23	918,4	2,9	918,4
14:52:23	921,2	2,8	921,2
14:53:23	923,9	2,7	923,9
14:54:23	926,7	2,8	926,7
14:55:23	929,4	2,7	929,4
14:56:23	932,1	2,7	932,1
14:57:23	935	2,9	935
14:58:23	937,8	2,8	937,8

14:59:23	940,6	2,8	940,6
15:00:23	943,2	2,6	943,2
15:01:23	946,1	2,9	946,1
15:02:23	948,8	2,7	948,8
15:03:23	951,7	2,9	951,7
15:04:23	954,5	2,8	954,5
15:05:23	957,1	2,6	957,1
15:06:23	959,7	2,6	959,7
15:07:23	962,4	2,7	962,4
15:08:23	965,3	2,9	965,3
15:09:23	968,1	2,8	968,1
15:10:22	970,9	2,8	970,9
15:11:23	973,7	2,8	973,7
15:12:23	976,4	2,7	976,4
15:13:23	979,3	2,9	979,3
15:14:23	982,1	2,8	982,1
15:15:23	984,8	2,7	984,8
15:16:23	987,5	2,7	987,5
15:17:23	990,3	2,8	990,3
15:18:22	993,1	2,8	993,1
15:19:22	995,8	2,7	995,8
15:20:23	998,7	2,9	998,7
15:21:23	1001,5	2,8	1001,5
15:22:22	1004,2	2,7	1004,2
15:23:22	1007,1	2,9	1007,1
15:24:22	1009,9	2,8	1009,9
15:25:23	1012,6	2,7	1012,6
15:26:22	1015,4	2,8	1015,4
15:27:22	1018,2	2,8	1018,2
15:28:23	1020,9	2,7	1020,9
15:29:23	1023,7	2,8	1023,7
15:30:22	1026,5	2,8	1026,5
15:31:23	1029,3	2,8	1029,3
15:32:22	1032,1	2,8	1032,1
15:33:22	1034,9	2,8	1034,9
15:34:22	1037,4	2,5	1037,4
15:35:23	1040,3	2,9	1040,3
15:36:23	1043,1	2,8	1043,1
15:37:22	1045,9	2,8	1045,9
15:38:22	1048,7	2,8	1048,7
15:39:22	1051,2	2,5	1051,2
15:40:22	1053,9	2,7	1053,9
15:41:22	1056,8	2,9	1056,8

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 09;36;37.ru
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

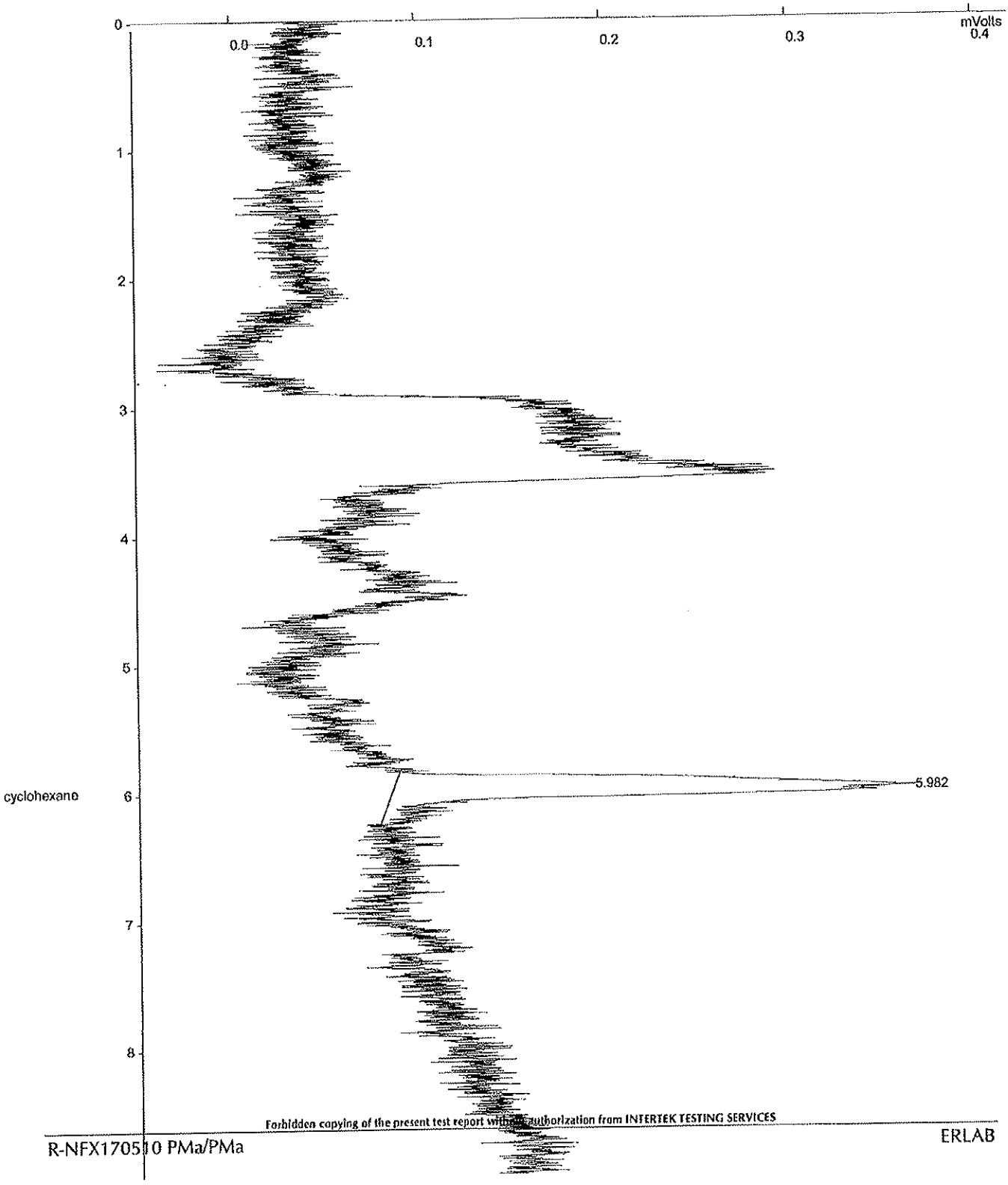
Injection Date: 01/06/2010 09:36 Calculation Date: 01/06/2010 09:45

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 21%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 09;36;37.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 09:36 Calculation Date: 01/06/2010 09:45

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.982	0.102	2487	BB	9.1	
	Totals:	100.0000		0.102	2487			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 41 microVolts

Noise (used): 64 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 10;02;43.rv
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

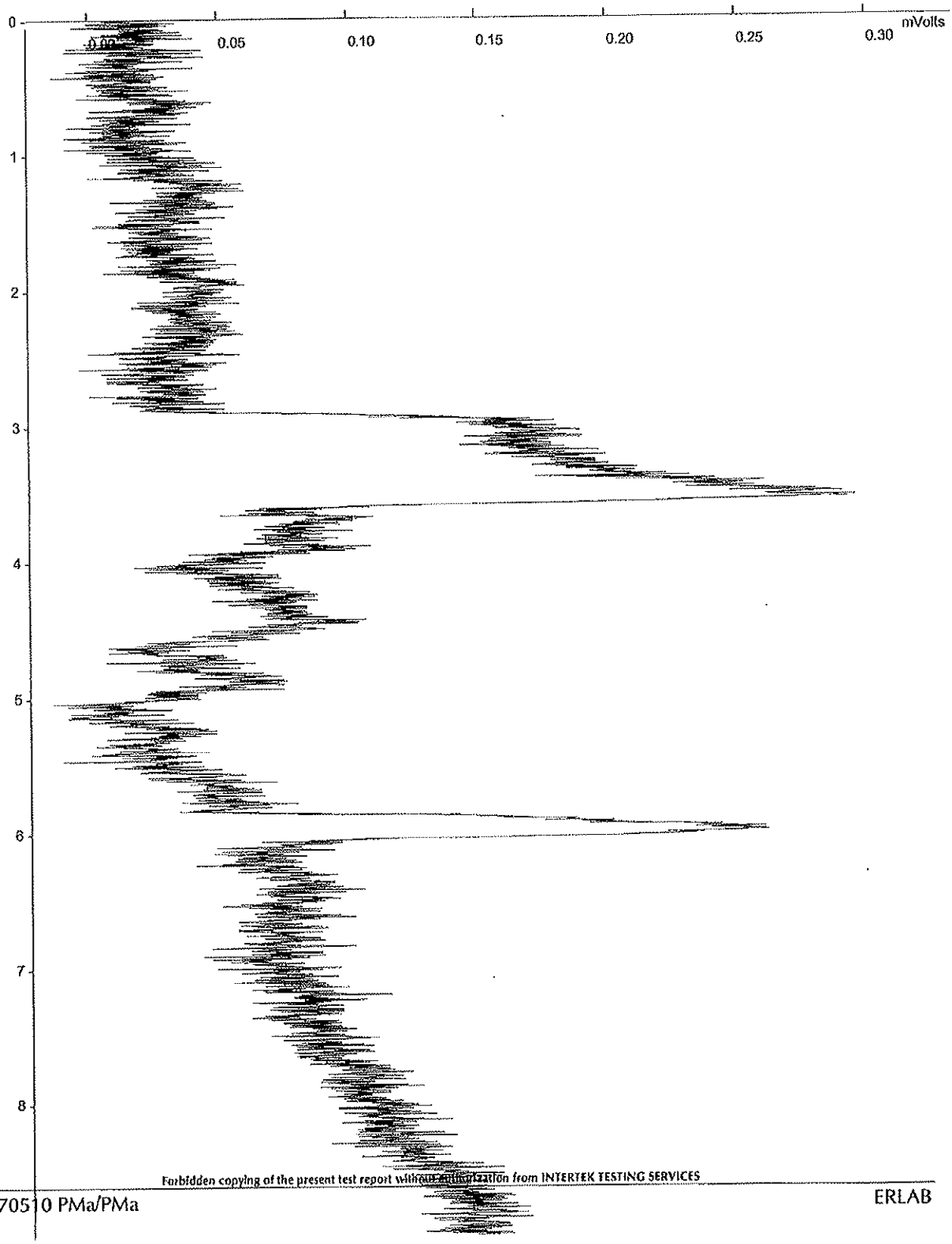
Injection Date: 01/06/2010 10:02 Calculation Date: 01/06/2010 10:11

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 9%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 10;02;43.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 10:02 Calculation Date: 01/06/2010 10:11

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
Totals:		0.0000		0.000	0			

Total Unidentified Counts : 0 counts

Detected Peaks: 0 Rejected Peaks: 0 Identified Peaks: 0

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 28 microVolts

Noise (used): 61 microVolts - monitored before this run

Manual injection

Data Handling: No peaks

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 voie respiratoire 10;26;40.rt
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : voie respiratoire

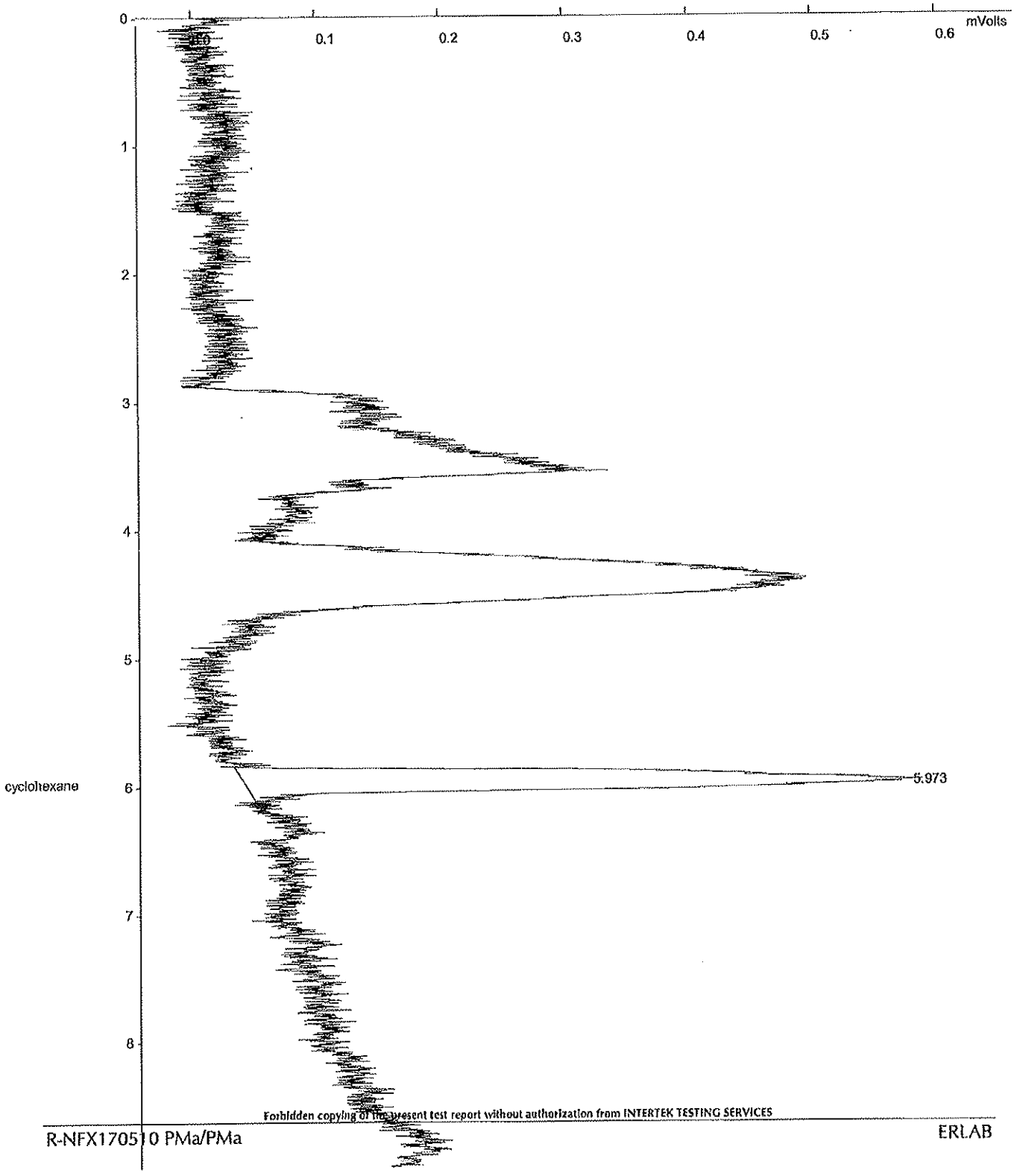
Injection Date: 01/06/2010 10:26 Calculation Date: 01/06/2010 10:35

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 2 Zero Offset = 9%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Print Date: Wed Jun 02 16:24:07 2010 Page 1 of 1

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 voie respiratoire 10;26;40.run
Method File : C:\SaturnWS\methodes Roberto\nouvelles methodes\Phase3.mth
Sample ID : voie respiratoire

Injection Date: 01/06/2010 10:26 Calculation Date: 01/06/2010 10:35

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.973	0.093	4625	BB	9.5	
	Totals:	100.0000		0.093	4625			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 10 microVolts

Noise (used): 56 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 10;50;42.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

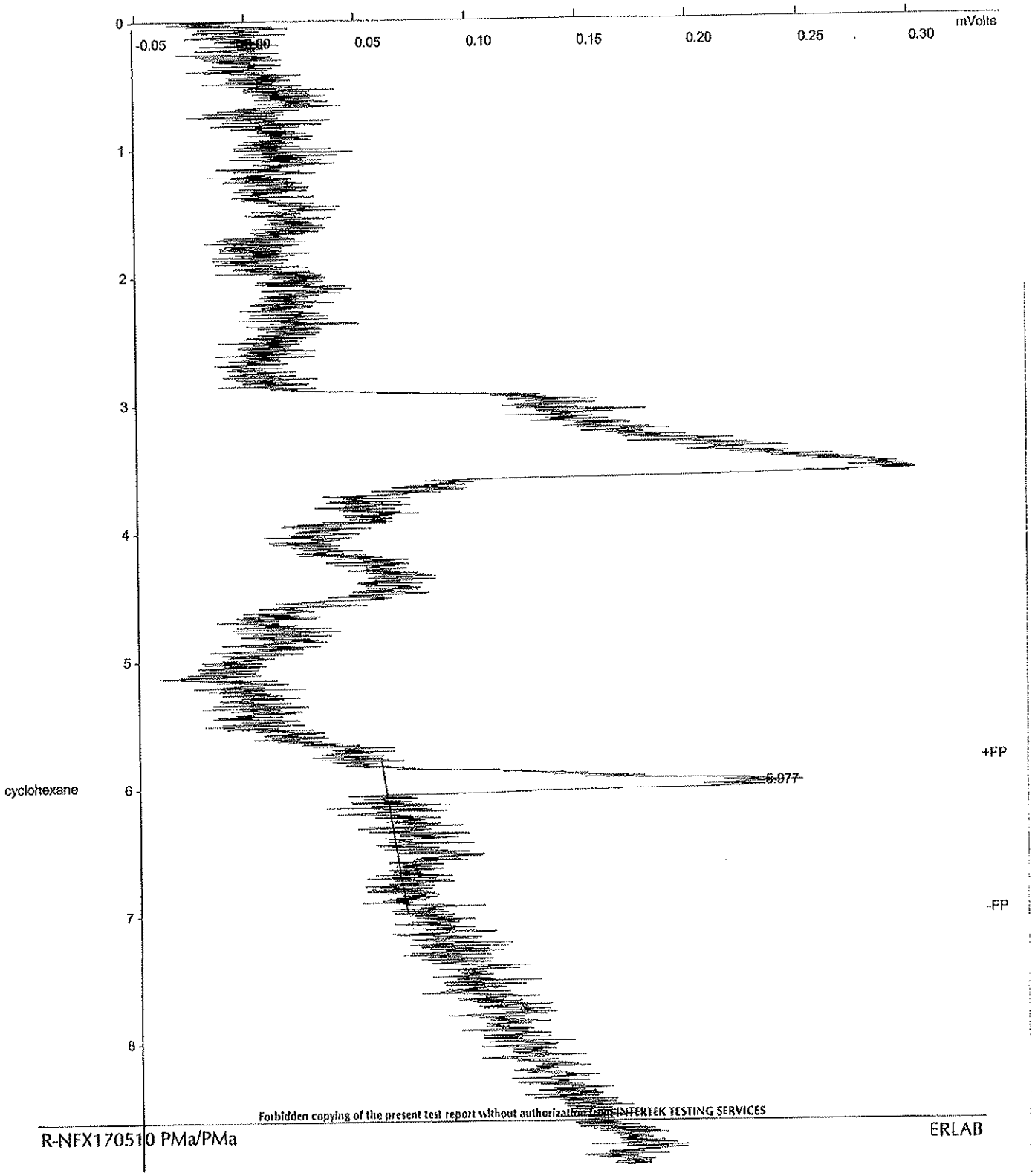
Injection Date: 01/06/2010 10:50 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 20%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



File :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 10;50;42.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 10:50 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.977	0.097	1656	BB	5.8	
	Totals:	100.0000		0.097	1656			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 1 microVolts

Noise (used): 70 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 11;14;46.rt
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth **141/171**
Sample ID : sortie

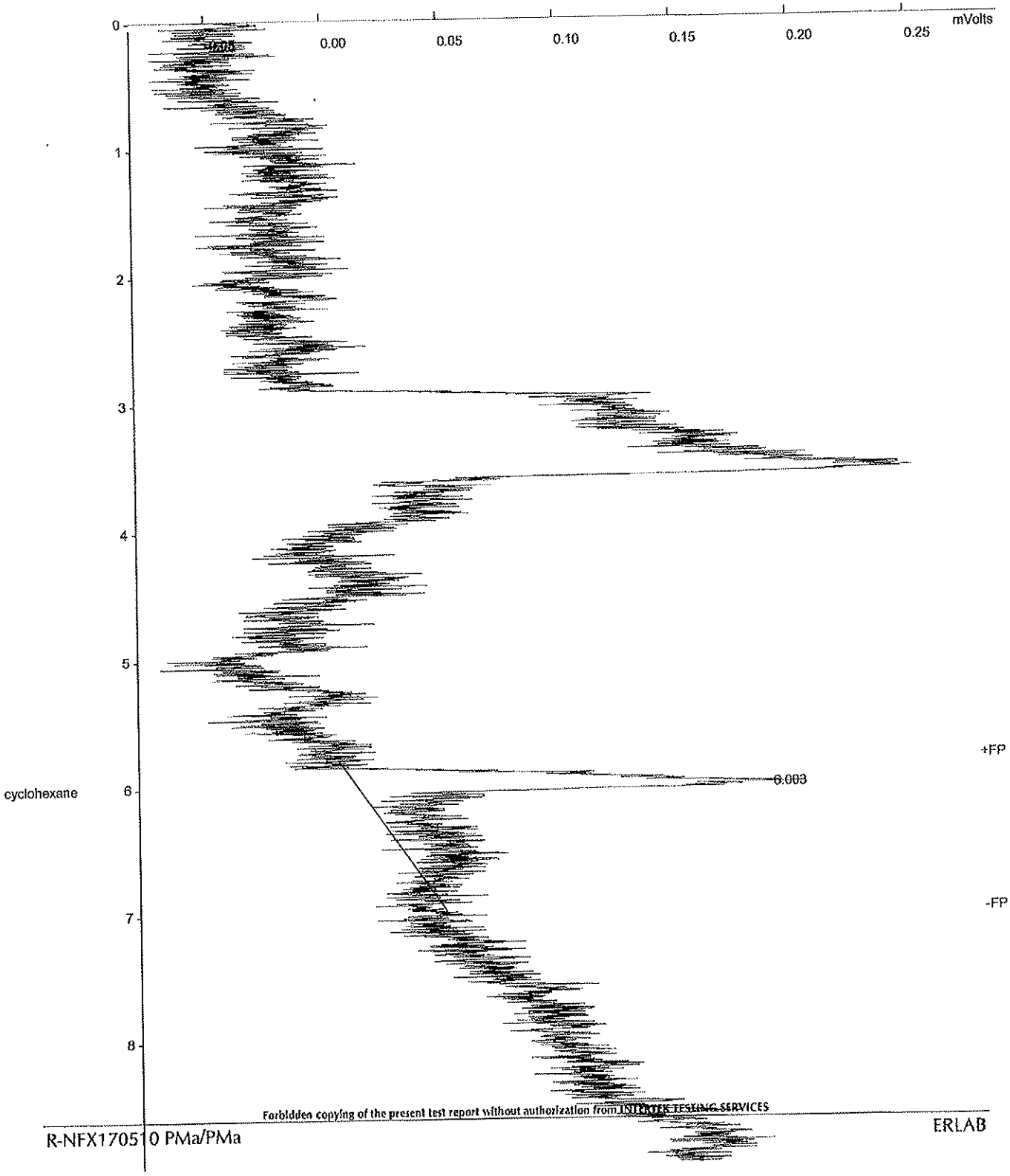
Injection Date: 01/06/2010 11:14 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 33%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 11;14;46.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 11:14 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	6.003	0.122	1981	BB	6.7	
	Totals:	100.0000		0.122	1981			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -52 microVolts

Noise (used): 92 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 11;39;00.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth **143/171**
Sample ID : sortie

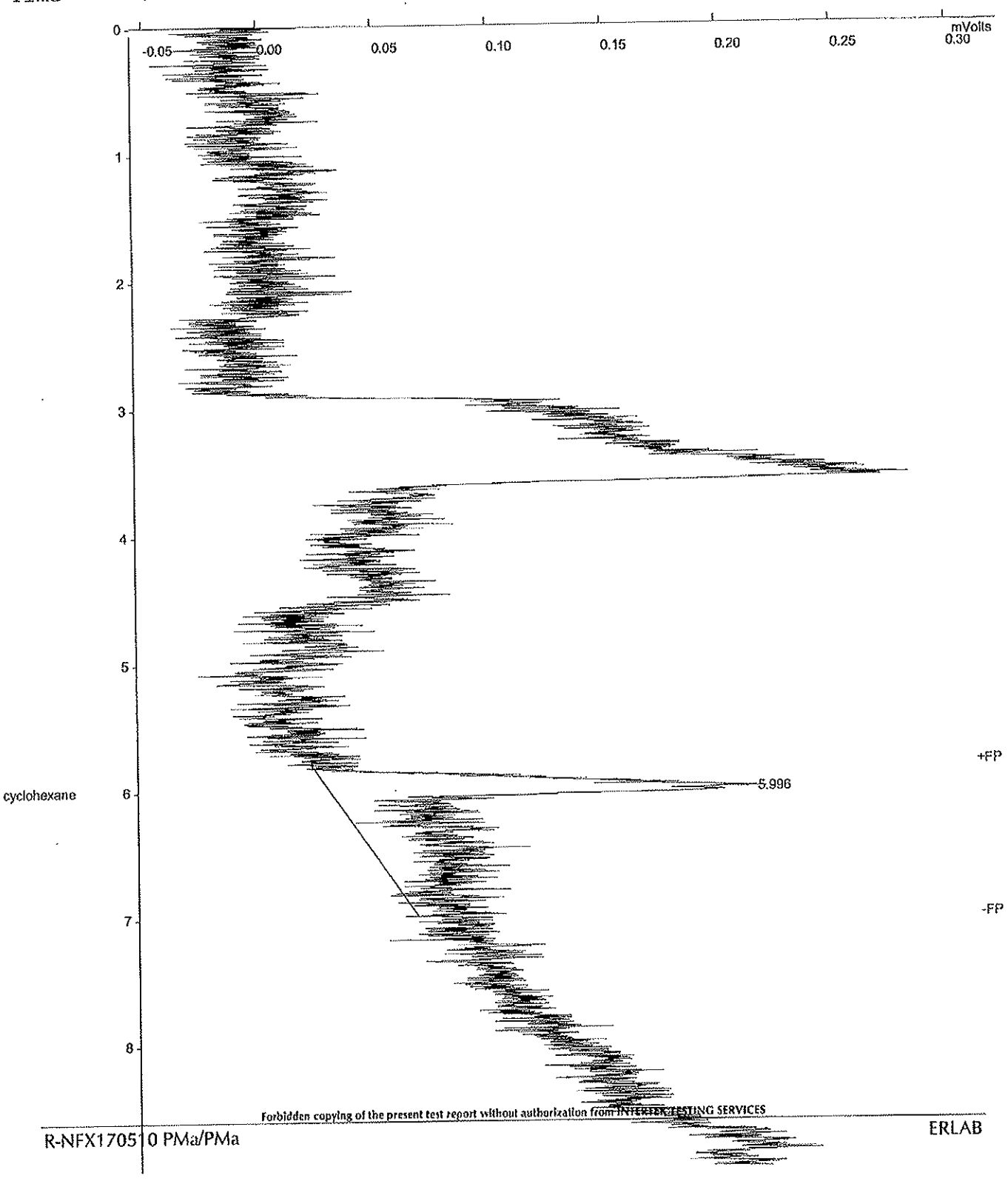
Injection Date: 01/06/2010 11:39 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 22%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



R-NFX17051 0 PMa/PMa ERLAB

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 11;39;00.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 11:39 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.996	0.116	3108	BB	7.4	
	Totals:	100.0000		0.116	3108			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 0 microVolts

Noise (used): 93 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 12;03;10.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

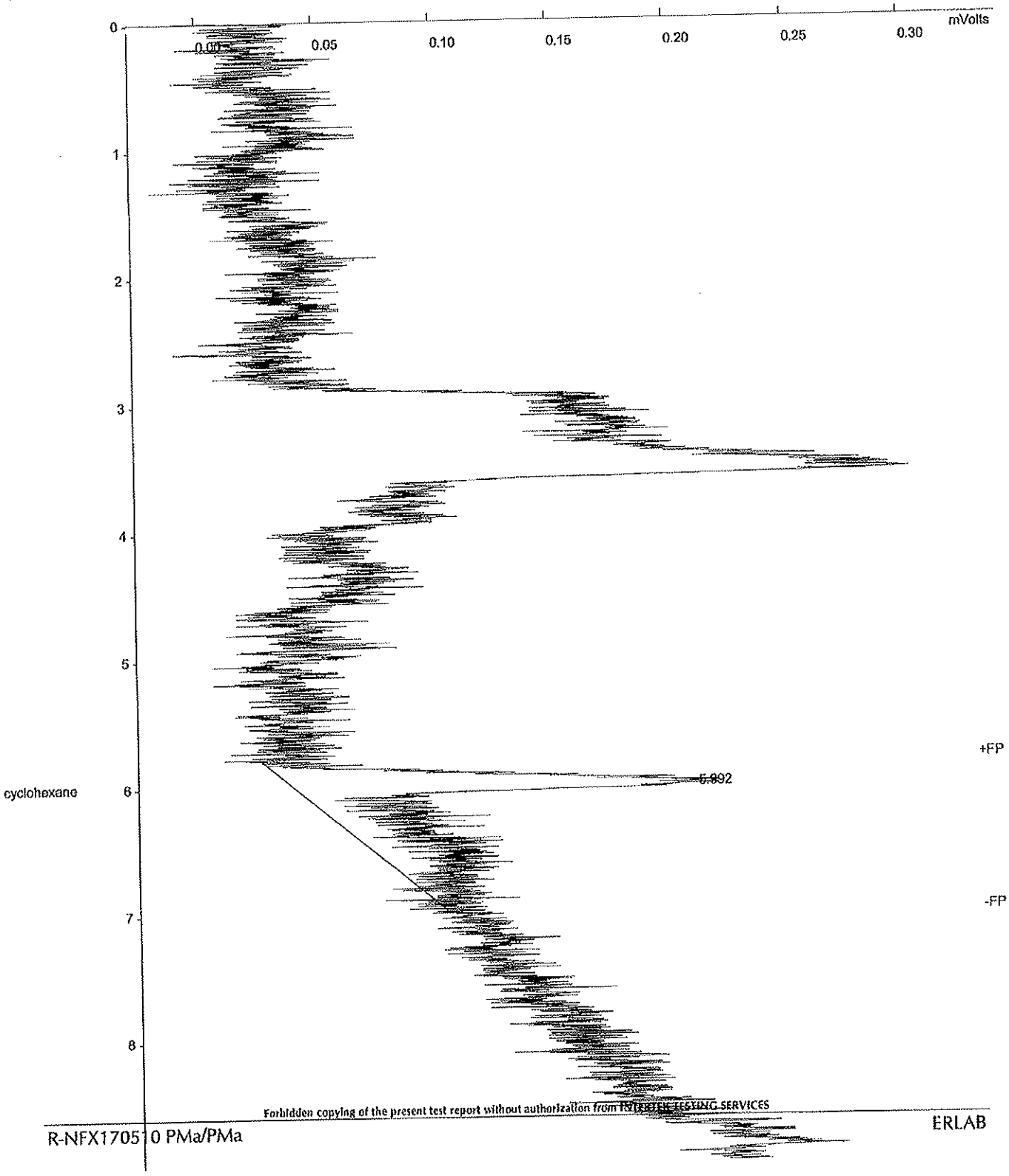
Injection Date: 01/06/2010 12:03 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 11%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 12;03;10.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 12:03 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.992	0.112	2928	BB	7.7	
	Totals:	100.0000		0.112	2928			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 10 microVolts

Noise (used): 64 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 12;27;20.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

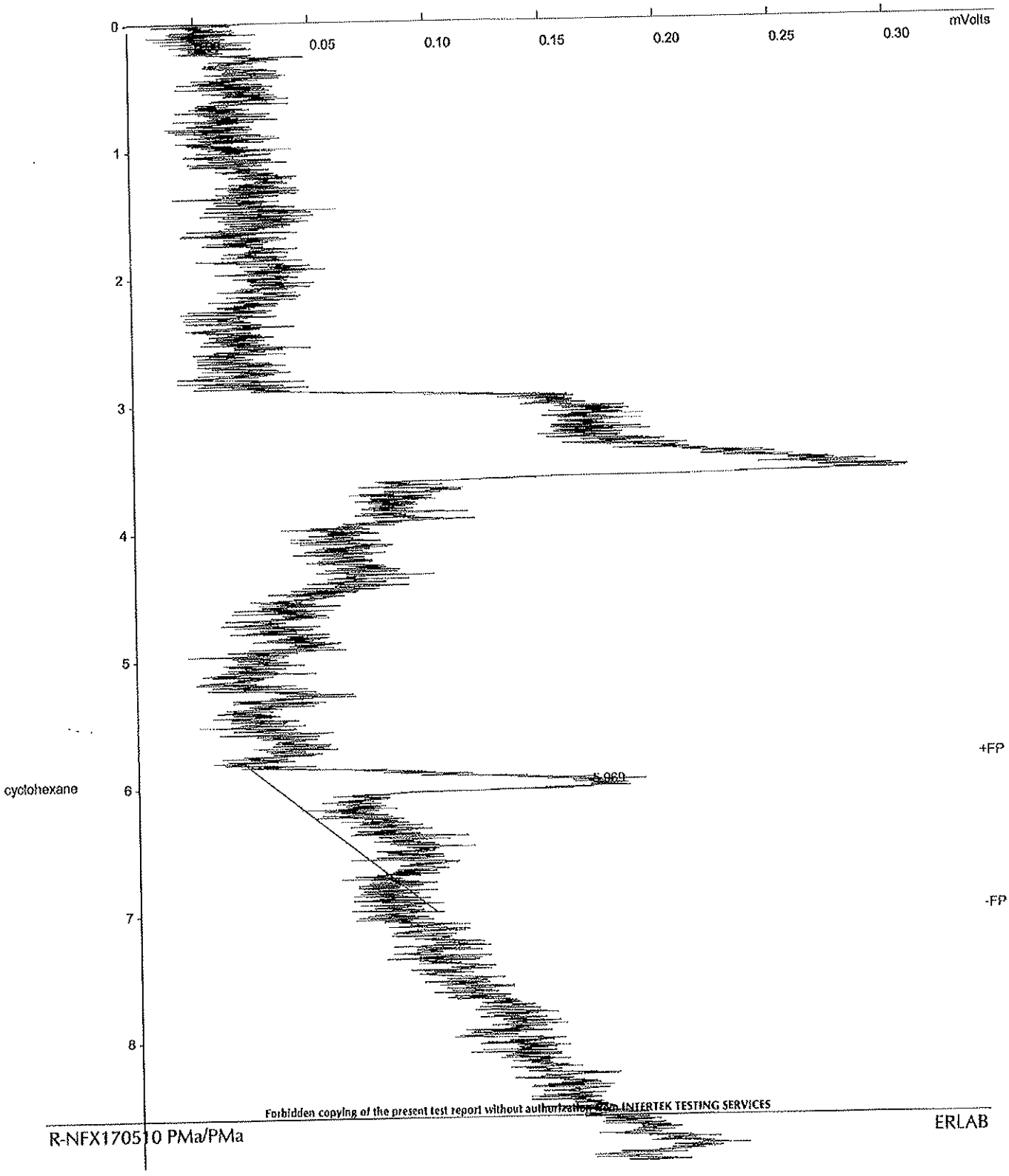
Injection Date: 01/06/2010 12:27 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 11%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 12;27;20.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 12:27 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.969	0.089	2052	BB	7.6	
	Totals:	100.0000		0.089	2052			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: 9 microVolts

Noise (used): 79 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 12;51;35.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth **149/171**
Sample ID : sortie

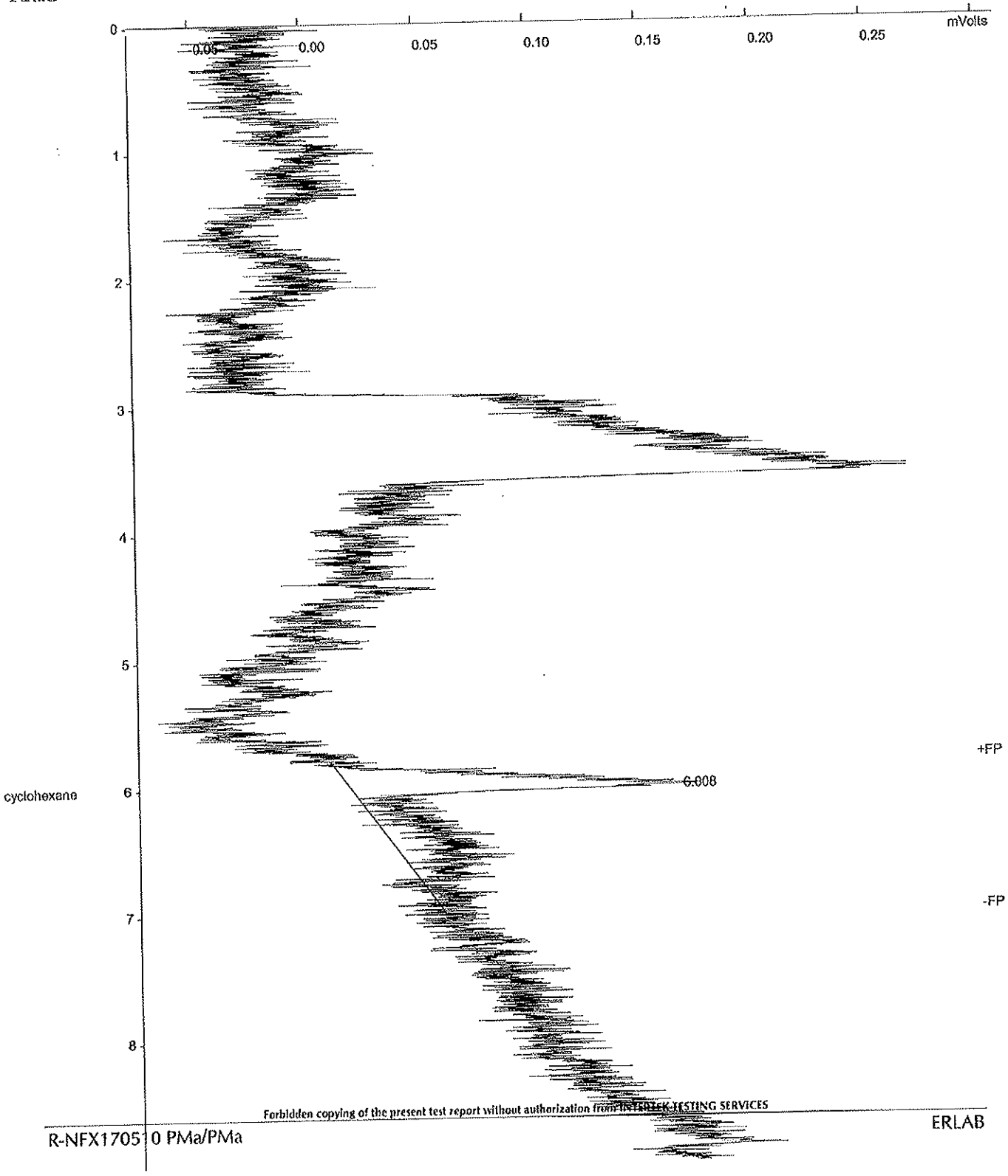
Injection Date: 01/06/2010 12:51 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 31%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 12;51;35.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 12:51 Calculation Date: 02/06/2010 14:25

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	6.008	0.128	1970	BB	5.7	
	Totals:	100.0000		0.128	1970			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -40 microVolts

Noise (used): 79 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 13;15;53.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth **151/171**
Sample ID : sortie

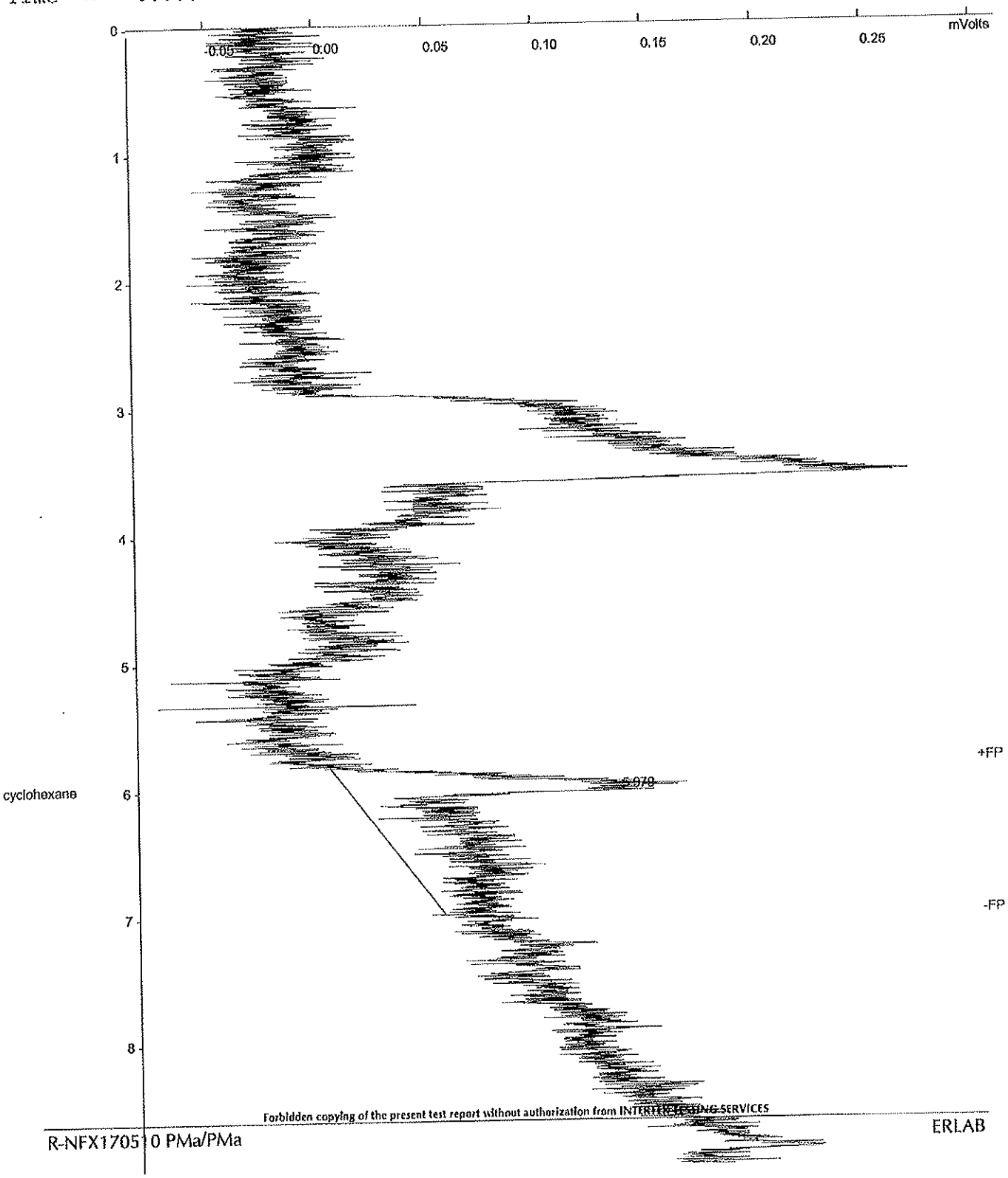
Injection Date: 01/06/2010 13:15 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 34%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



R-NFX170510 PMa/PMa ERLAB

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 13;15;53.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 13:15 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.979	0.099	2957	BB	6.2	
	Totals:	100.0000		0.099	2957			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -39 microVolts

Noise (used): 86 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 13;40;12.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth **153/171**
Sample ID : sortie

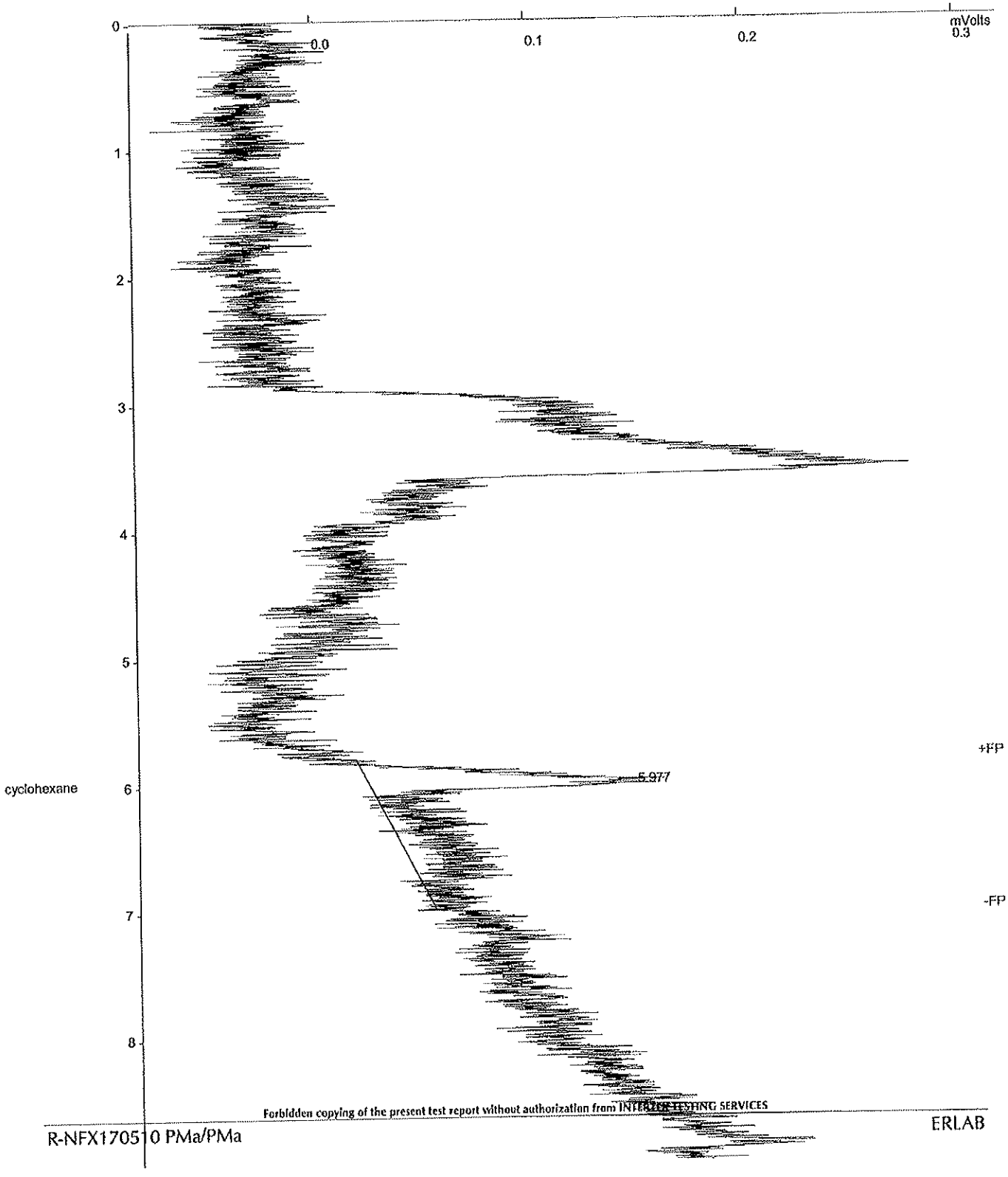
Injection Date: 01/06/2010 13:40 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 34%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 13;40;12.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 13:40 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.977	0.097	1845	BB	6.1	
	Totals:	100.0000		0.097	1845			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -35 microVolts

Noise (used): 68 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 14;04;28.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth **155/171**
Sample ID : sortie

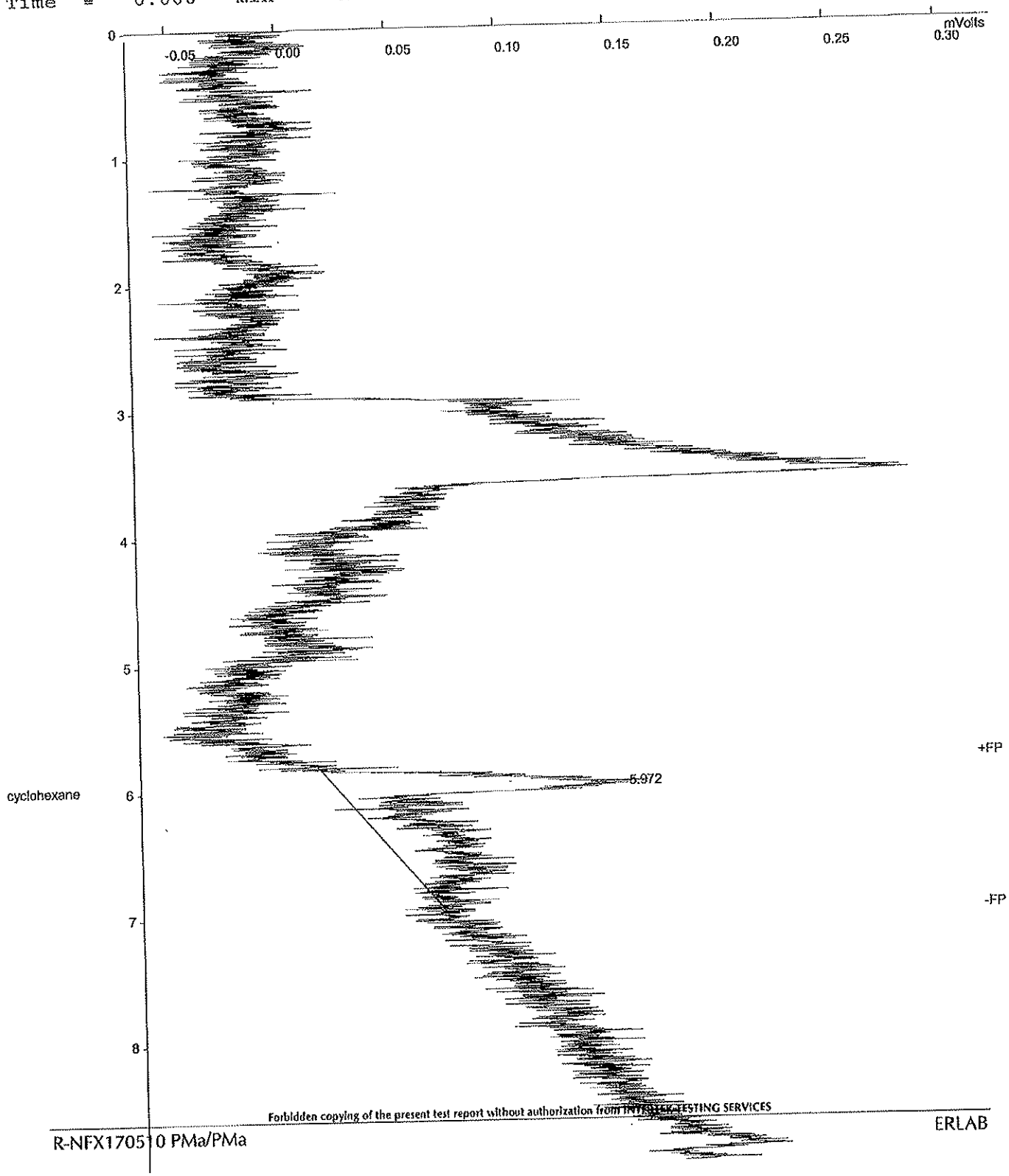
Injection Date: 01/06/2010 14:04 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 27%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



ERLAB

R-NFX17051 0 PMa/PMa

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 14;04;28.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 14:04 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.972	0.092	2284	BB	7.1	
	Totals:	100.0000		0.092	2284			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -5 microVolts

Noise (used): 69 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 14;28;52.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

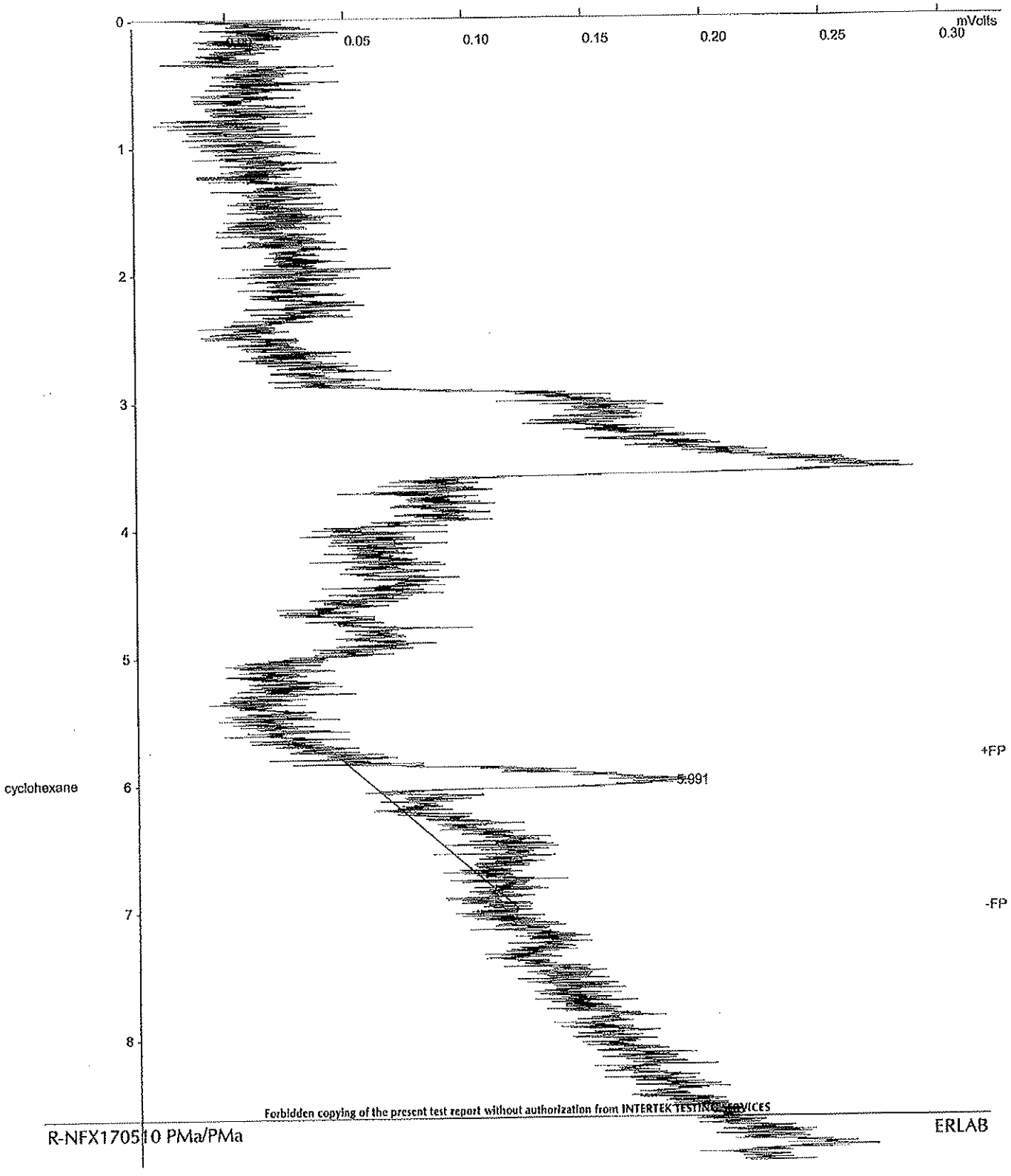
Injection Date: 01/06/2010 14:28 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 15%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 14;28;52.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 14:28 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.991	0.111	1793	BB	7.3	
	Totals:	100.0000		0.111	1793			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -5 microVolts

Noise (used): 77 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 14;53;17.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth **159/171**
Sample ID : sortie

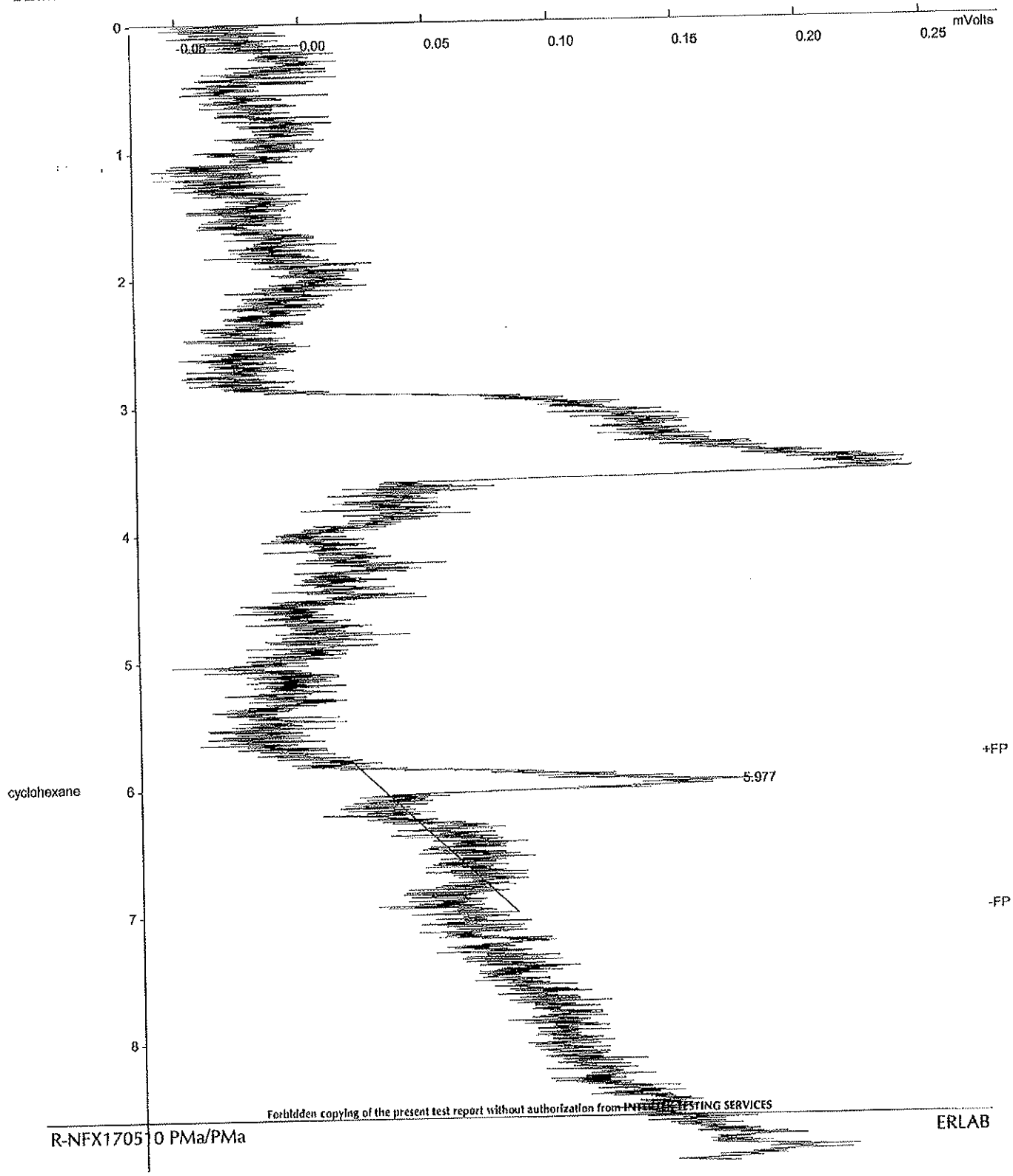
Injection Date: 01/06/2010 14:53 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 27%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 14;53;17.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 14:53 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.977	0.097	908	BB	5.3	
	Totals:	100.0000		0.097	908			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -33 microVolts

Noise (used): 82 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 15;17;45.ru
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

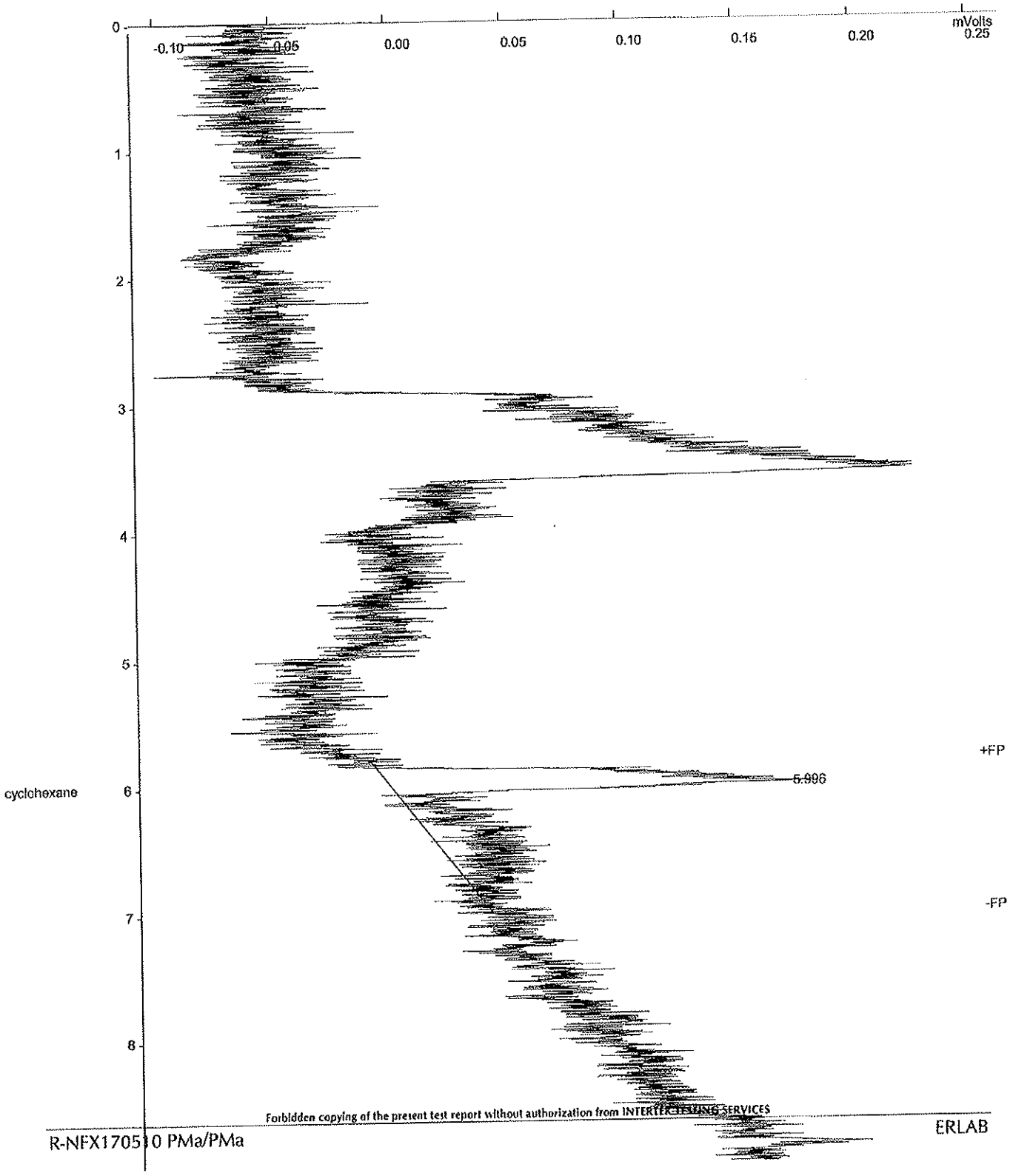
Injection Date: 01/06/2010 15:17 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 45%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 15;17;45.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 15:17 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.996	0.116	2179	BB	8.9	
	Totals:	100.0000		0.116	2179			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -45 microVolts

Noise (used): 91 microVolts - monitored before this run

Manual injection

****

Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 15;42;11.r
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

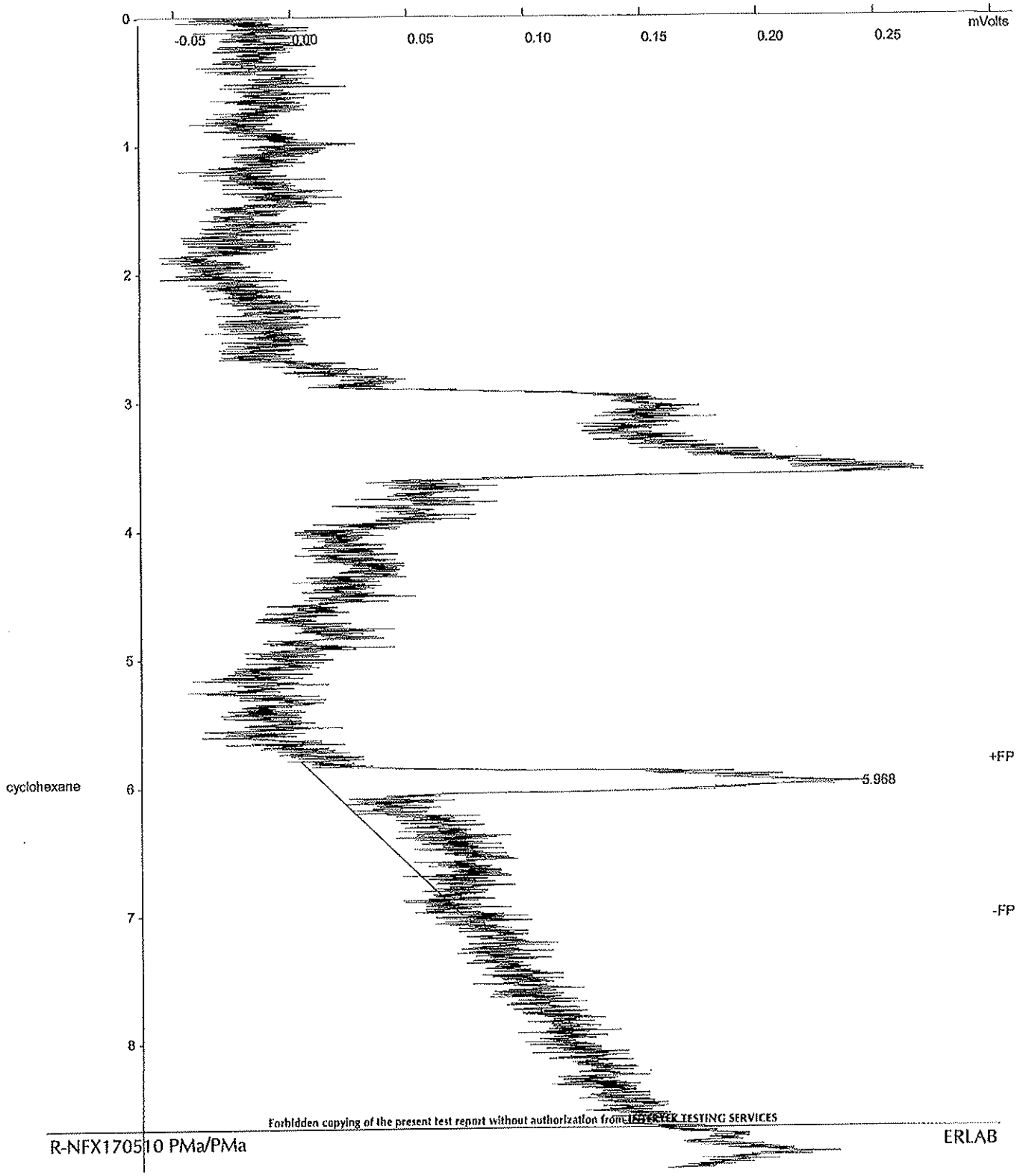
Injection Date: 01/06/2010 15:42 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Chart Speed = 2.52 cm/min Attenuation = 1 Zero Offset = 26%
Start Time = 0.000 min End Time = 8.992 min Min / Tick = 1.00



Title :
Run File : c:\saturnws\methode cme\nettoyage piege\01-06-2010 sortie 15;42;11.run
Method File : c:\saturnws\methodes roberto\nouvelles methodes\phase3.mth
Sample ID : sortie

Injection Date: 01/06/2010 15:42 Calculation Date: 02/06/2010 14:26

Operator :
Workstation:
Instrument : Saturn GC/MS #1
Channel : Front = FID

Detector Type: 3800 (1 Volt)
Bus Address : 44
Sample Rate : 10.00 Hz
Run Time : 8.992 min

** Saturn GC/MS Workstation Version 5.51 ** 02030-7721-3C0-4704 **

Run Mode : Analysis
Peak Measurement: Peak Area
Calculation Type: Percent

Peak No.	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	cyclohexane	100.0000	5.968	0.088	3178	BB	10.0	
	Totals:	100.0000		0.088	3178			

Total Unidentified Counts : 0 counts

Detected Peaks: 1 Rejected Peaks: 0 Identified Peaks: 1

Multiplier: 1 Divisor: 1 Unidentified Peak Factor: 0

Baseline Offset: -15 microVolts

Noise (used): 84 microVolts - monitored before this run

Manual injection

****

RELATIVE HUMIDITY AND TEMPERATURES DATA TABLE

CYCLOHEXANE TEST

See attached documents.

Testo 175-H2 38215624 (cyclohexane test, inside the enclosure)

Date	Time	[%HR]	[°C]
01/06/2010	09:30:00	42,9	23,5
01/06/2010	10:00:00	45,6	24,3
01/06/2010	10:30:00	45,3	25,0
01/06/2010	11:00:00	45,2	25,4
01/06/2010	11:30:00	44,7	25,8
01/06/2010	12:00:00	44,6	26,0
01/06/2010	12:30:00	44,5	26,2
01/06/2010	13:00:00	44,5	26,4
01/06/2010	13:30:00	44,3	26,5
01/06/2010	14:00:00	44,2	26,6
01/06/2010	14:30:00	44,2	26,8
01/06/2010	15:00:00	44,2	26,9
01/06/2010	15:30:00	44,1	27,0

Testo 175-H2 38215782 (cyclohexane test, outside the enclosure)

Date	Time	[%HR]	[°C]
01/06/2010	09:30:00	44,1	23,3
01/06/2010	10:00:00	45,8	24,2
01/06/2010	10:30:00	46,0	24,8
01/06/2010	11:00:00	45,9	25,2
01/06/2010	11:30:00	45,8	25,4
01/06/2010	12:00:00	45,8	25,7
01/06/2010	12:30:00	45,8	25,8
01/06/2010	13:00:00	45,8	25,9
01/06/2010	13:30:00	45,7	26,0
01/06/2010	14:00:00	45,8	26,2
01/06/2010	14:30:00	45,6	26,3
01/06/2010	15:00:00	45,6	26,4
01/06/2010	15:30:00	45,5	26,5

MISCELLANEOUS

See attached documents.

Panreac

ANALYSIS CERTIFICATE

CODE: 131090
PRODUCT: 2-Propanol (Reag. Ph. Eur.) PA-ACS-ISO
BATCH: 0000180758

MFG. DATE: 04/2009 DATE: 23/04/2009 MIN. VAL.: 04/2015

SPECIFICATIONS	GUARANTEE VALUE	ACTUAL VALUE
Minimum assay (G.C.)	99,8 %	99,9 %
Identity	IR p/t.	IR p/t.
Density at 20/4	0,784-0,786	0,786
Boiling range	81-83°C	81-83°C
MAXIMUM LIMIT OF IMPURITIES		
APHA colour	10	<10
Insoluble matter in H_2O	p/t.	p/t.
Non-volatile matter	0,001 %	<0,001 %
Acetone (G.C.)	0,002 %	<0,002 %
Ethanol (G.C.)	0,01 %	<0,01 %
Methanol (G.C.)	0,05 %	<0,05 %
1-Propanol (G.C.)	0,05 %	<0,05 %
Reducing substances to $KMnO_4$ (as O)	0,0005 %	<0,0005 %
Darkened substances by H_2SO_4	p/t.	p/t.
Acidity	0,0001 meq/g	<0,0001 meq/g
Alkalinity	0,0001 meq/g	<0,0001 meq/g
Carbonyl compounds (as Propionaldehyde)	0,002 %	<0,002 %
Carbonyl compounds (as Acetone)	0,002 %	<0,002 %
Water (H_2O)	0,1 %	0,0047 %
Metals by ICP [mg/Kg (ppm)]		
Ag	0,05	<0,05
Al	0,5	<0,5
As	0,05	<0,05
Au	0,05	<0,05
B	0,02	<0,02
Ba	0,1	<0,1
Be	0,02	<0,02
Bi	0,05	<0,05
Ca	0,5	<0,5
Cd	0,05	<0,05
Co	0,02	<0,02
Cr	0,02	<0,02
Cu	0,02	<0,02
Fe	0,1	<0,1
Ga	0,02	<0,02
Ge	0,05	<0,05
Hg	0,05	<0,05
In	0,05	<0,05

K	0,1	<0,1
Li	0,05	<0,05
Mg	0,1	<0,1
Mn	0,02	<0,02
Mo	0,02	<0,02
Na	0,5	<0,5
Ni	0,02	<0,02
P	0,2	<0,2
Pb	0,1	<0,1
Pt	0,02	<0,02
S	0,2	<0,2
Sb	0,02	<0,02
Si	0,2	<0,2
Sn	0,1	<0,1
Sr	0,2	<0,2
Ti	0,02	<0,02
Tl	0,02	<0,02
V	0,02	<0,02
Zn	0,1	<0,1
Zr	0,02	<0,02

For industrial use we recommend to check out when received.

Panreac Química S.A.
Technical Department. Quality Control.

J. Puigdengolas

Panreac

ANALYSIS CERTIFICATE

CODE: 131250
PRODUCT: Cyclohexane (Reag. Ph. Eur.) PA-ACS-ISO
BATCH: 0000117329

MFG. DATE: 03/2008 **DATE:** 10/03/2008 **MIN. VAL.:** 03/2014

SPECIFICATIONS	GUARANTEE VALUE	ACTUAL VALUE
Minimum assay (G.C.)	99,5 %	99,9 %
Identity	IR p/t.	IR p/t.
Density at 20/4	0,776-0,780	0,778
Freezing point	>6,0 °C	>6,0 °C
MAXIMUM LIMIT OF IMPURITIES		
APHA colour	10	<10
Non-volatile matter	0,001 %	<0,001 %
Cyclohexene (G.C.)	0,01 %	<0,01 %
Cyclopentane (G.C.)	0,05 %	<0,05 %
Methylcyclohexane (G.C.)	0,05 %	<0,05 %
Reducing substances to $KMnO_4$	p/t.	p/t.
Darkened substances by H_2SO_4	p/t.	p/t.
Aromatic compounds (U.V.) (as C_6H_6)	0,01 %	<0,01 %
Sulphur compounds (as S)	0,002 %	<0,002 %
Acidity	0,0003 meq/g	<0,0003 meq/g
Water (H_2O)	0,02 %	0,0026 %
Thiophene	p/t.	p/t.
Metals by ICP [mg/Kg (ppm)]		
Ag	0,05	<0,05
Al	0,5	<0,5
As	0,05	<0,05
Au	0,05	<0,05
B	0,02	<0,02
Ba	0,1	<0,1
Be	0,02	<0,02
Bi	0,05	<0,05
Ca	0,5	<0,5
Cd	0,05	<0,05
Co	0,02	<0,02
Cr	0,02	<0,02
Cu	0,02	<0,02
Fe	0,1	<0,1
Ga	0,02	<0,02
Ge	0,05	<0,05
Hg	0,05	<0,05
In	0,05	<0,05
K	0,1	<0,1
Li	0,05	<0,05

Mg	0,1	<0,1
Mn	0,02	<0,02
Mo	0,02	<0,02
Na	0,5	<0,5
Ni	0,02	<0,02
P	0,2	<0,2
Pb	0,1	<0,1
Pt	0,02	<0,02
S	0,2	<0,2
Sb	0,02	<0,02
Si	0,2	<0,2
Sn	0,1	<0,1
Sr	0,2	<0,2
Ti	0,02	<0,02
Tl	0,02	<0,02
V	0,02	<0,02
Zn	0,1	<0,1
Zr	0,02	<0,02

For industrial use we recommend to check out when received.

Panreac Química S.A.
Technical Department. Quality Control.

J. Puigdengolas