

**Certificate of Analysis No. : 1630547**

**Customer**

BRAIMIOTIS - P. SCARLATOS Ltd  
144, 3rd SEPTEMVRIOU  
11251 ATHENS

Attn.: Mr GOROGIAS

Date of issue: 9/11/2016

**Sample information**

Sample kind :	Parts of Electronic cigarette
Sample identification :	5 Pin Compact Battery (D-MCOMP-161018-006) / P14 Clearomizer / OCC Coil Cylinder 1,6 Ohm (D-COCC-161018-006), prod/imp.: JFT Co, Ltd.1209, Seoulsoop SK-V1 Tower,5,Seongsuilro 8-gil, Seongdong-gu,Seoul, KOREA 04793
Received on :	31/10/2016 10:35:00 a.m.
Packaging :	---
Seals :	None
Temperature :	Ambient
Condition on receipt :	Normal

**Sampling information**

Sampling responsible :	Customer
Date :	---
Location :	---
Point :	---
Method :	---

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**Analysis result**

Date of analysis : 4/11/2016 – 8/11/2016

PARAMETER	METHOD	UNITS	RESULT	LIMITS
<b>E-cigarette emission testing</b>			.	
<b>Emission protocol</b>			.	
<b>E-liquid</b>			Reference A (AFNOR XP D 90-300-3)	
<b>MOD</b>			5 Pin Compact Battery (D-MCOMP-161018-006)	
<b>Atomizer</b>			P14 Clearomize	
<b>Atomizer head/coil</b>			OCC Coil Cylinder 1,6 Ohm (D-COCC-161018-006)	
<b>Coil Composition</b>			Cr20Ni80	
<b>Battery type</b>			li-ion	
<b>Battery capacity</b>		mAh	900	
<b>Wattage</b>		W	7,87	
<b>Voltage</b>		V	3,55	
<b>Device Airflow</b>		on/off	Full ON	
<b>Puff duration</b>		sec	3	
<b>Puff interval (frequency)</b>		sec	30	
<b>Puffs per set</b>		unit	20	
<b>Set number</b>		unit	5	
<b>Puff number</b>		unit	100	
<b>Aspiration Airflow</b>		l/min	1,1	
<b>Puff volume</b>		ml	55	
<b>Vapor temperature at mouthpiece outlet</b>		°C	<60	
<b>Inclination angle of e-cigarette tank</b>		°	45	
<b>Emissions</b>			.	
<b>Nicotine 1st set</b>	* GC/FID	mg / 100 puffs	11	
<b>Nicotine 3rd set</b>	* GC/FID	mg / 100 puffs	10	
<b>Nicotine 5th set</b>	* GC/FID	mg / 100 puffs	10	
<b>Nicotine average</b>		mg / 100 puffs	10,3	

The analysis results refer only to the items tested

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(\*)Method out of the scope of accreditation

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**Conclusion**

The mass variability of the emitted nicotine is less than 25% for each measurement relative to the average value of the 3 measurements.

For  
A. TSAKALIDIS Inc.

A. TSAKALIDIS  
Managing Director

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## APPENDIX A

### SAMPLE'S PHOTOGRAPH

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## APPENDIX B

### CHROMATOGRAMS

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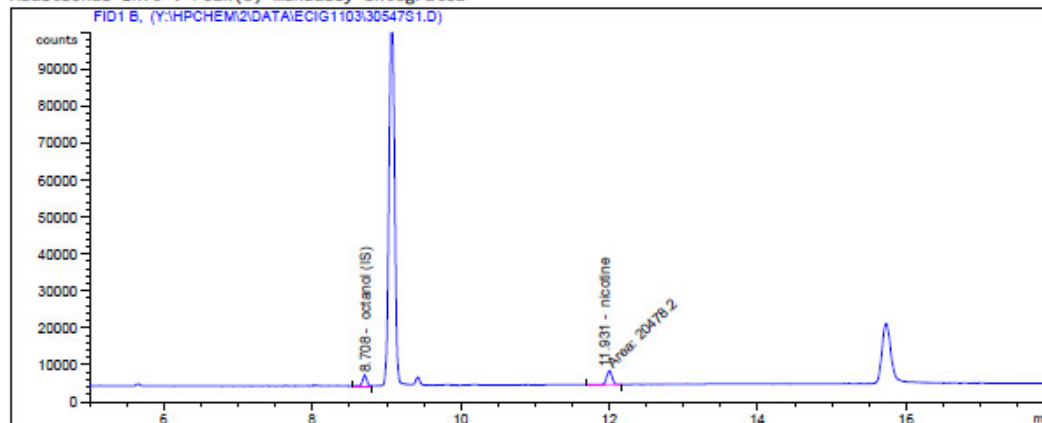
### 1. Nicotine in the first set

Data File Y:\HPCHEM\2\DATA\ECIG1103\30547S1.D  
Sample Name: 30547s1

```
=====
Acq. Operator   : Arkouli                      Seq. Line :   14
Acq. Instrument : Instrument 2                  Location  : Vial 14
Injection Date  : 4/11/2016 9:38:59 µµ         Inj       :    1
                                           Inj Volume: 1 µl

Acq. Method     : C:\HPCHEM\2\METHODS\ECIGAR.M
Last changed    : 28/10/2016 4:50:39 µµ by drillia
Analysis Method : C:\METHODS (PROS) FID\ECIGAR2.M
Last changed    : 10/11/2016 2:09:29 µµ
Method Info     : GC5 HP wax
=====
```

Additional Info : Peak(s) manually integrated



#### Area Percent Report

```
=====
Sorted By       : Signal
Calib. Data Modified : 10/11/2016 2:09:14 µµ
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID1 B,

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Area %	Name
1	8.708	BV +	0.0777	1.05575e4	34.01728	octanol (IS)
2	11.931	MF +	0.0884	2.04782e4	65.98272	nicotine
3	12.557	+	0.0000	0.00000	0.00000	diethylen
Totals :				3.10357e4	100.0000	



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### 2. Nicotine in the third set

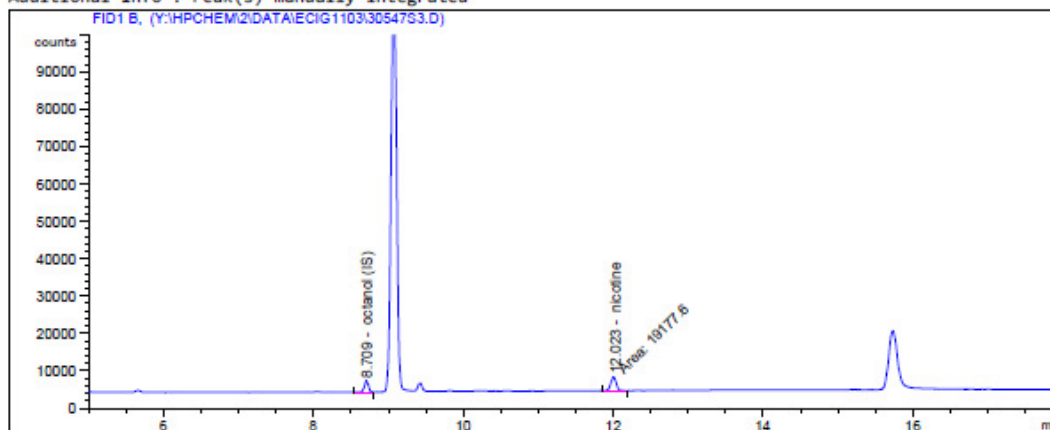
Data File Y:\HPCHEM\2\DATA\ECIG1103\3054753.D

Sample Name: 30547s3

```
=====
Acq. Operator   : Arkouli                      Seq. Line :   15
Acq. Instrument : Instrument 2                  Location  : Vial 15
Injection Date  : 4/11/2016 10:06:27 µµ        Inj       :    1
                                           Inj Volume: 1 µl

Acq. Method     : C:\HPCHEM\2\METHODS\ECIGAR.M
Last changed    : 28/10/2016 4:50:39 µµ by drillia
Analysis Method : C:\METHODS (PROS) FID\ECIGAR2.M
Last changed    : 10/11/2016 2:09:29 µµ
Method Info     : GC5 HP wax
=====
```

Additional Info : Peak(s) manually integrated



#### Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 10/11/2016 2:09:14 µµ
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID1 B,

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Area %	Name
1	8.709	BV +	0.0787	1.10557e4	36.56799	octanol (IS)
2	12.023	MF +	0.0842	1.91776e4	63.43201	nicotine
3	12.557	+	0.0000	0.00000	0.00000	diethylen
<b>Totals :</b>				<b>3.02333e4</b>	<b>100.0000</b>	



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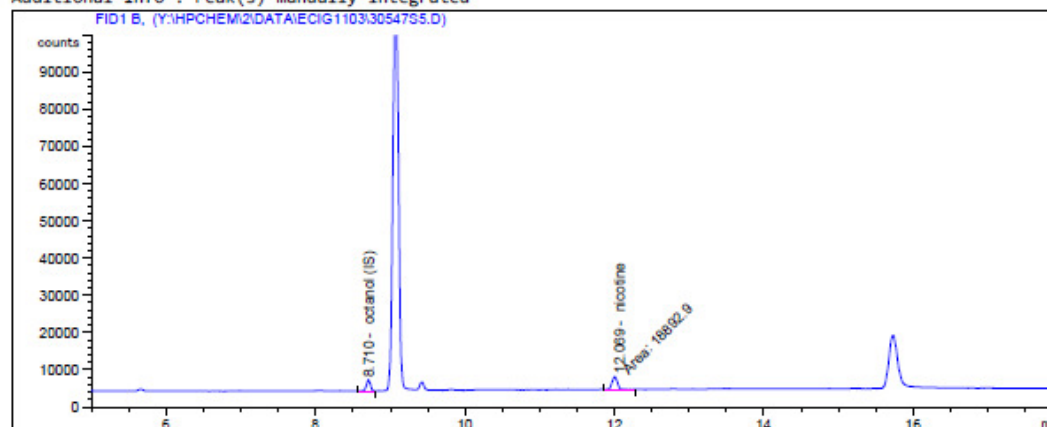
### 3. Nicotine in the fifth set

Data File Y:\HPCHEM\2\DATA\ECIG1103\3054755.D  
 Sample Name: 30547s5

```
=====
Acq. Operator   : Arkouli                      Seq. Line :   16
Acq. Instrument : Instrument 2                  Location  : Vial 16
Injection Date  : 4/11/2016 10:34:00 µµ        Inj       :    1
                                           Inj Volume: 1 µl

Acq. Method     : C:\HPCHEM\2\METHODS\ECIGAR.M
Last changed    : 28/10/2016 4:50:39 µµ by drillia
Analysis Method : C:\METHODS (PROS) FID\ECIGAR2.M
Last changed    : 10/11/2016 2:09:29 µµ
Method Info     : GC5 HP wax
=====
```

Additional Info : Peak(s) manually integrated



#### Area Percent Report

```
=====
Sorted By      : Signal
Calib. Data Modified : 10/11/2016 2:09:14 µµ
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID1 B,

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Area %	Name
1	8.710	BV +	0.0794	1.09231e4	36.63505	octanol (IS)
2	12.069	MF +	0.0880	1.88929e4	63.36495	nicotine
3	12.557	+	0.0000	0.00000	0.00000	diethylen
Totals :				2.98160e4	100.0000	

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## APPENDIX C

### ANALYTICAL METHODS DESCRIPTION

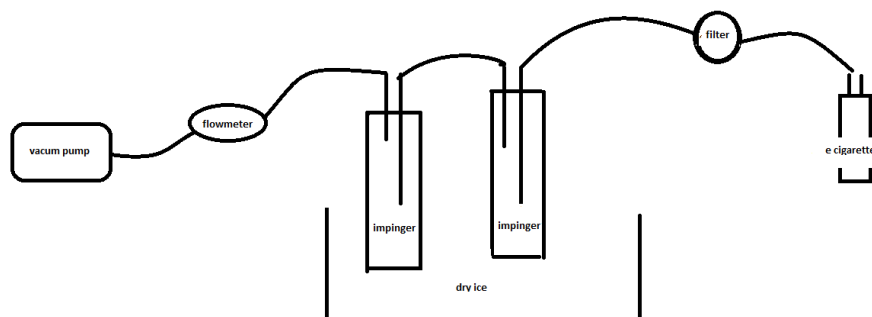
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**TESTING OF CONSTANT EMISSION OF NICOTINE FROM ELECTRONIC CIGARETTE DEVICE**

**1. Vapor sampling**

For the testing of constant emission of nicotine from electronic cigarette devices, a vaporization test using the reference liquid A is carried out (&5.2.4, AFNOR XP D90-300-3) according to the parameters defined in paragraphs 5.4.2 , 5.4.7 & 5.9 of AFNOR XP D90-300-3 (July 2016), and the concentration of nicotine which is emitted during the first, third and fifth period of puffs is determined.

For the collection of vapor, filters of 37 mm diameter and traps under cooling are used by the use of the following device.



The vapor is collected on filter which is followed by the traps that contain methanol and are cooled by dry ice.

- Each filter is extracted by methanol and nicotine is determined by gas chromatography and flame ionization detector.

**2. Description of analytical methods**

**Determination of nicotine**

**Instrumentation**

- Gas Chromatograph (GC) Hewlett Packard 5890
- Capillary column HP-INNOWAX with dimensions: length 30m x diameter 0.32mm x film thickness 0.25μ
- Injector split/splitless
- Detector FID
- Carrier gas helium

**Experimental procedure**

The filter is extracted by methanol using ultrasounds, followed by filtration of the extract. Using an appropriate aliquot of the extract, the internal standard 1-octanol is added. Then, analysis by GC/FID is followed and quantification of nicotine is done by the use of calibration curve, which is constructed by the analysis of four standards.