

**Certificate of analyses/Quality statement****E-cigarette: IJOY Cigpet Volca Kit****E-liquid: Z01016008**

## Testprocedures/References

## Sampling

- Machine for e-cigarettes for aerosol generation and recording for routine analysis terms and standard conditions (draft DIN Standards Committee for Food and Agricultural Products NA057-04-01-05 AK)
- Preparations for inhalation, aerodynamic assessment (PharmEur 2.9.18)

## Analytics

- Determination of aldehydes and ketones in air via reaction with 2,4-dinitrophenylhydrazine, separation and detection of the derivative method by Waters, testing by BioChem Laboratory for Biological and Chemical Analysis GmbH
- Determination of nicotine content by HPLC / UV method, testing / method by BioChem Laboratory for biological and Chemische Analytik
- Determination of metals by AAS/GTT, testing/method by Techpharm GmbH

In accordance with DIN-EN-ISO 9001: 2015 and 17025: 2005 samples were taken and tested by qualified laboratories under GMP condition.

**Results correspond with expected values**

Date  Signature

04.11.2016

Head of Quality Control

Test item	Expected value	result	evaluation
Setting e-cigarette	Specification		
1. resistance (Ohm) 2. wattage (W)	0,6 20	Not available	corresponds
Setting sampler			corresponds
1. Puff duration 2. Puff frequency 3. Number of puffs 4. negative pressure	2 sec +/- 0,1 2/minute 60 100-200mbar	2 2 60 100-200 mbar	
Nicotin content * <sup>1</sup>			corresponds
1. Volume e-liquid puffed/60 puffs 2. mg nicotin/10ml puffed* <sup>2</sup> 3. mg nicotin/60 puffs* <sup>3</sup>	>0,2 ml Minimum 10% = 16 mg	0,35 98 4,2	
Aldehyde + Keton-Emissions* <sup>4</sup>	(MAK (mcg/m <sup>3</sup> )) -> mcg/60 puffs		corresponds
1. Formaldehyde 2. Acetaldehyde 3. Acroleine 4. others (Acetone, Propionaldehyde, Crotonaldehyde, ...)	(370) < 83 mcg (91.000) < 20.475 mcg (250) -> < 56 mcg Single value < 50 mcg	4,9mcg 6,9 mcg 0,5 mcg 17,2 mcg	
Metal-Emissions* <sup>5</sup>	Mcg/60puffs* <sup>6</sup>		corresponds
1. Al (Aluminium) 2. Cr (Chromium) 3. Fe (Iron) 4. Ni (Nickel) 5. Sn (Tin)	No limit 0,29 No limit 0,60 6,40	55,2 0,1 5,1 1,6 <0,1	

\*1: E-Cigarette working group discussion paper on submission of notification under article 20 of Directive 2014/40/EU Chapter 4

\*2: Nicotine dose in total by inhalation content of 10ml e-liquid under standard conditions

\*3: Nicotine uptake of standard smoker smoking 6 cigarettes (10 puffs/cigarette)

\*4: E-Cigarette working group discussion paper on submission of notification under article 20 of Directive 2014/40/EU Chapter 6.

Calculation expected value: MAK-Wert (mcg/m<sup>3</sup>) \*0,225 (=breath volume puff duration 60 puffs= 30 minutes)

\*5: E-Cigarette working group discussion paper on submission of notification under article 20 of Directive 2014/40/EU Chapter 3 e-cigarettes

\*6: Inhalation maximum/day according Guideline for Elemental Impurities Draft 23.Juli.2013 Appendix 2, Table 2.1 x safety factor 10