

Dental Recycling Services b.v.
Att: Mr Alphonse Steger
Industrieweg 4 9636 DB Zuidbroek
The Netherlands

Test of DRS-Amalgam separator according to ISO 11143:2008

Test object

Two DRS- amalgam separators with trademark DELTASEP (Classification Type 2-sedimentation system). Dimensions of the separators height: 163mm. The diameter: 238mm. The separator with serial number IS004755 was empty and marked P1. The separator with serial number IS004968 was filled and marked P2G (filled 95% by client DRS b.v.) Included was the folder Annexes: Specification, Manual, Parts, Assembling the DRS-separator, Instruction for the dentist and Cleaning the DRS-separator. The client forwarded the Amalgam separator and the folder.

Marking: DRS - AMALGAM SEPARATOR

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SP Technical Research Institute of Sweden

Postal address
SP
Box 857
SE-501 15 BORÅS
Sweden

Office location
Västeråsen
Brinellgatan 4
SE-504 62 BORÅS

Phone / Fax / E-mail
+46 10 516 50 00
+46 33 13 55 02
info@sp.se

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Assignment

Tests of applicable requirements according to section 5 in EN ISO 11143:2008 test of separation efficiency with flow rate 2, 5 l/min. Three tests with an empty amalgam separator (0%) and three tests with the separator filled to 95% of maximum filling level.

Control of warning system for collecting container, alarm system for collecting container, removal of removable filled collecting container and maximum fillable volume of the removable collecting container.

Instructions for installation, use, maintenance and service according to section 11 in EN ISO 11143:2008 and marking according to section 12 in EN ISO 11143:2008 were also checked.

Method

ISO 11143:2008. The standard amalgam samples used were (10 g - ISO 11143 Charge 100416-11/12 November 2012) supplied by Becker Technologies GmbH. The membrane filters used during the test of separation efficiency were Millipore 8.0µm White SCWP, Millipore 3.0µm White SSWP and Millipore 1.2µm White RAWP in series with Millipore Woven Mesh Spacers as separating gauzes.

Results

Clause 5.1 Efficiency

Flow rate 2.5 l/min

Flow rate of 2.0 l/min water during the amalgam slurry addition + 0.5 l/min amalgam slurry (according to 9.3.2.3.2) and a flow rate of 2.5 l/min during the flushing period (according 9.3.2.6.1).

Test	Flow (l/min)	Filling level (%)	Samples weight (g)	Amount passing separator (g)	Efficiency of separation (%)
"1"	2,5	0	9.992	0.301	96.991
"2"	2,5	0	9.995	0.284	97.163
"3"	2,5	0	9.988	0.340	96.601
"4"	2,5	95*	9.994	0.434	95.657
"5"	2,5	95*	9.992	0.345	96.549
"6"	2,5	95*	9.991	0.468	95.318

The result mean value according to 9.6 (Determination of efficiency) is 95.318 %.

The testing shows that the amalgam separator fulfil the requirements in ISO 11143:2008, clause 5.1, when tested with the max flow rate 2.5l/min and maximum filling level of 560 ml.

* The maximum filling level 95% is 532 ml. The filling material consisted of 140.0 ml filling scrap (<0.3 mm) and 392 ml glass pellets with 0,750-1, 00 mm diameter, filled by client.

Clause 5.2 Warning system for collecting container

This requirement is not applicable.

Clause 5.3 Alarm system for collecting container

This requirement is not applicable.

Clause 5.4 Alarm system function for malfunction of amalgam separator

This requirement is not applicable.

Clause 5.5 Removal of removable filled collecting container

The amalgam separator fulfils the requirements.

Clause 5.6 Maximum fillable volume of the removable collecting container

The amalgam separator fulfils the requirements. Maximum fillable volume of the removable collecting container is 2.5l.

Clause 5.7 Electrical safety

This requirement is not applicable.

Clause 11 Instructions for installation, use, maintenance and service

The amalgam separator fulfils the requirements.

Clause 12 Marking

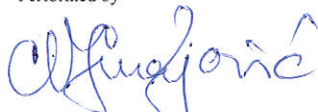
The amalgam separator fulfils the requirements.

Conclusion of the test results

The test result shows that the tested amalgam separator fulfils all applicable requirements of the ISO 11143:2008.

SP Technical Research Institute of Sweden
SP Chemistry, Materials and Surfaces - Chemistry

Performed by


Nijaz Smajovic

Examined by


Marcus Vestergren