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## Test of amalgam separator according to SS-EN ISO 11143

### Test object

Six Amalgam separators (Type 2 classification) in sealed packagings, three corresponding drawings listed below, instructions for installation, use, maintenance and service. The test objects were marked as described below.

The client forwarded the Amalgam separators and the corresponding drawings and documents.

### Drawings:

- 1) SIE DENTAL AB, AMALGAMABSCHIEDER TYP RASCH SYSTEM 890, MODUL 1-AMALGAMFILTER-ANSICHTEN
- 2) SIE DENTAL AB, AMALGAMABSCHIEDER TYP RASCH SYSTEM 890, MODUL 1-SCHNITT A-A UND B-B
- 3) SIE DENTAL AB, AMALGAMABSCHIEDER TYP RASCH SYSTEM 890, MODUL 1-SCHNITT C-C

### Marking:

Amalgam Separator  
 Rasch System 890  
 Serial NO 5122-5125 and 5014-5015  
 2000-12-14 and 2001-01-16  
 2000-12-14--2001-01-19

### Arrival at SP:

### Date of testing:

## Project

Tests of applicable requirements according to section 5 in EN ISO 11143:1999.  
 Test of separation efficiency. Three tests with an empty amalgam separator (0%) and three tests with a separator filled to the maximum filling level (100%).  
 Control of warning system, alarm system for collecting container, removal of filled collecting container or filter and check of maximum mass of filled collecting container.

Additionally instructions for installation, use, maintenance and service according to section 11 in EN ISO 11143:1999 and marking according to section 12 in EN ISO 11143:1999 was checked.

## Method

SS-EN ISO 11143:1999. The standard amalgam samples were used (10 g - ISO 11143 November 2000). The membrane filters used during the test of separation efficiency was Millipore Glass Fibre Prefilters, Millipore Type SM 5,0µm and Millipore Type RA 1,2µm in series.

**Results**
**General**

The drawings were found to correctly describe the separators.

**5.1 Efficiency**

Test	Flow (L/min)	Filling level (%)	Amount passing separator (g)	Degree of separation (%)
"1"	4	0	0.0329	99.7
"2"	4	0	0.1335	98.7
"3"	4	0	0.2898	97.1
"4"	3.7*	100**	0.3260	96.7
"5"	3.8*	100**	0.1851	98.1
"6"	4.0*	100**	0.4570	95.4

The result according to 9.6 (Determination of efficiency) is 96,7 %.

The standard deviation with 0-% filling level is 1,3%.

The standard deviation with 100-% filling level is 1,4%.

The maximum filling level of 100% is 1300g.

\* During the Test 4-6 the flow was unstable.

\*\*The filling material consisted of 72 ml amalgam scrap (<0.3 mm) supplied by the client, and glass pellets 167 ml with 1 mm diameter. The total volume was 239 ml. The density of the amalgam scrap in the test was 5.43g/ml.

In test 1-3 the Amalgam Separator with serial No 5124 was tested. In test 4-6 the Amalgam Separator with serial No 5014 was tested.

**5.2 Warning system**

The amalgam separator fulfils the requirements.

**5.3 Alarm system for collecting container**

The amalgam separator fulfils the requirements.

**5.3 Removal of filled collecting container or filter**

The amalgam separator fulfils the requirements.

**5.3 Maximum mass of filled collecting container**

The amalgam separator fulfils the requirements.

**11 Instructions for installation, use, maintenance and service**

The amalgam separator fulfils the requirements.

**12 Marking**

The amalgam separator fulfils the requirements.

**The testing shows that the tested Amalgam Separators fulfil the requirements in EN ISO 11143:1999.**

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