

Sie Dental AB
Ken Kopelman
Box 20016
200 74 Malmö

Handläggare, enhet / *Handled by, department*

SP Chemistry and Materials Technology
+46 16 52 77, peter.nyman@sp.se

Datum / *Date*

June 13, 2003

Beteckning / *Reference*

F3 08558

Sida / *Page*

1 (2)

Test of separation efficiency according to SS-EN ISO 11143

Test object

Three Amalgam separators (Classification Type 2) in Styrofoam packaging with fittings. The test objects were marked as described below. Sie Dental AB forwarded the Amalgam separators.

Marking:

AMALGAM-SEPARATOR
RASCH SYSTEM 890
MODULE 1
NO. 20419, 20420 and 20421

Arrival at SP:

2003-04-14

Date of testing:

2003-04-14--06-06

Project

Test of separation efficiency at flowrate 2.0L/min. Three tests with an empty amalgam separator (0%) and three tests with a separator filled to the maximum filling level (100%), 1300g.

Method

SS-EN ISO 11143:1999. The standard amalgam samples were used (10 g - ISO 11143, Charge 100416-03/03 März 2003). The membrane filters used during the test of separation efficiency was 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 - Efficiency (Flowrate 2.0 L/min)

Test	Flow (L/min)	Filling level (%)	Amount passing separator (g)	Degree of separation (%)
"1"	2	0	<0.05	>99.5
"2"	2	0	<0.05	>99.5
"3"	2	0	<0.05	>99.5
"4"	2	100*	0.0682	99.3
"5"	2	100*	0.0475	99.5
"6"	2	100*	0.0828	99.2

The result according to section 9.6 in EN ISO 11143:1999 (Determination of efficiency) is 99.3 %.

The standard deviation with 0-% filling level is 0.1%.
 The standard deviation with 100-% filling level is 0.2%.

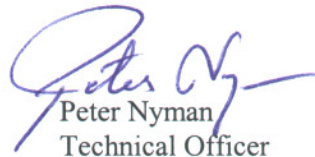
In test 4-6 the maximum filling level of 100% is 1300g.

*The filling material consisted of 80 ml amalgam scrap (<0.3 mm) supplied by the client, and glass pellets 187 ml with 1 mm diameter. The total volume was 267 ml. The density of the amalgam scrap in the test was 4.9 g/ml.

In test 1-3 the Amalgam Separator NO. 20421 was tested.
 In test 4-6 the Amalgam Separator NO. 20419 was tested.

**SP Swedish National Testing and Research Institute
 Inorganic Analytical Chemistry**


Conny Haraldsson
 Technical Manager



Peter Nyman
 Technical Officer