

Reference Material Datasheet

Version:	1.1
Issue date:	2023-10-20
Designation:	RM Dw 2023:C
Batch no:	386
Date of production:	2023-03-08
Manufacturer:	Swedish Food Agency, Sweden
Storage:	-18 °C or lower (but not lower than -55 °C)
Batch expiry date:	2025-06-30

Manufacturer and contact information

Swedish Food Agency	
Company name	Swedish Food Agency (Livsmedelsverket)
Unit	Unit for Microbiology
Address	P.O. Box 622
Post code	SE-75126
City	Uppsala
Country	Sweden
Telephone	+46 18 17 55 00
E-mail	micro@slv.se

Intended use

This reference material is designed for internal quality control of analytical work at microbiology laboratories. After reconstitution, the test material can be used for control of quantitative drinking water microbiology analyses, as well as for direct or indirect quality control of microbiological media.

Content

Table 1. Microorganisms included in RM Dw 2023:C

Microorganism	Strain*
<i>Shingomonas</i> sp.	SLV-547

* Internal strain identification number, Swedish Food Agency

Quality control

The reference material is tested for homogeneity at the Swedish Food Agency. No statistically relevant difference has been observed between vials.

Property value

Table 2. Quality control of RM Dw 2023:C. The results are from analysis of 10 individual vials, and are valid for a reconstitution volume of 204 ml. All values are expressed in $\sqrt{\text{cfu}} / 0.1 \text{ ml}$ ($\text{cfu} / 0.1 \text{ ml}$ re-transformed to the cfu scale).

Parameter	x_{RM}	s_{RM}	u_{RM}	Acceptance limits	Method and media
Slow growing bacteria 22 °C, 7 days	6.61 (44)	0.46	1.40	3.81 – 9.40 (15 – 88)	EN ISO 6222:1999, modified Yeast extract Agar, YeA

x_{RM} : Property value, to be used for start-up control chart.

s_{RM} : Standard deviation of the property value, to be used for start-up control chart.

u_{RM} : Standard uncertainty of the property value (includes uncertainty contributions from characterisation, homogeneity, transportation and method differences).

The lower/upper acceptance limits are calculated as: $x_{\text{RM}} \pm 2 * u_{\text{RM}}$ (expanded uncertainty at a 95 % confidence interval, with $k = 2$)

Traceability

Homogeneity, property values, standard deviations and control limits are calculated in accordance with ISO 17034 and ISO Guide 35. All values are metrologically traceable to the respective strains in the Swedish Food Agency's internal culture collection (Table 1).

Preparation of simulated drinking water sample

Reconstitute the vial content according to the instructions on the last page.

Please note that the final **204 ml** corresponds to the undiluted sample to be analysed.

The Swedish Food Agency uses phosphate buffer solution according to SS-EN ISO 8199 as diluent.

Analyses

The analyses should be performed in accordance with the methods used by the individual laboratory.

Acceptance limits for **0.1 ml** are given in Table 2.

Control charts

Instructions for construction of control charts are available at our website:

www.livsmedelsverket.se/RM-micro

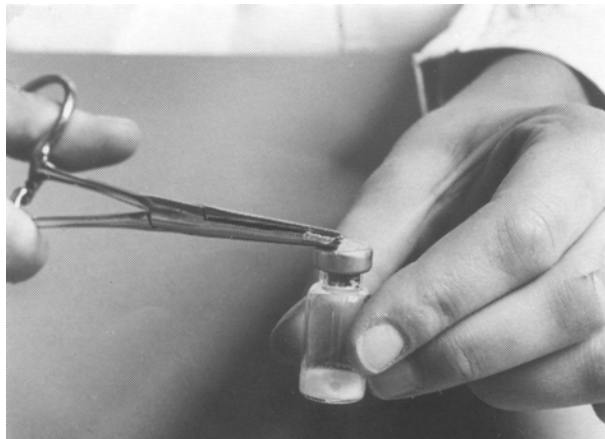
Approved by

Linnea Blom

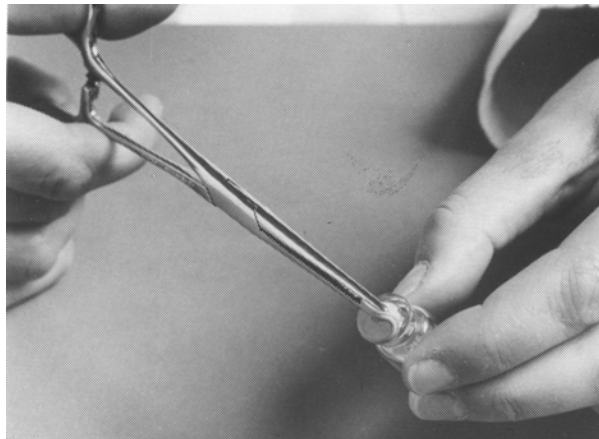
Linnea Blom

PT/RM Drinking water Coordinator

Sample preparation of freeze-dried cultures in glass vial



1. Twist the flap on the aluminium cap.
2. Remove the aluminium cap.



3. Remove the rubber plug.



4. Add 1 ml diluent with a sterile pipette.
5. Let the content dissolve (1-5 minutes).
6. Using a sterile pipette, transfer the suspension to a sterile bottle containing 200 ml room temperature diluent.
7. Add another 1 ml and carefully rinse the walls of the vial with the pipette.



8. Transfer the suspension to the bottle containing 201 ml diluent.
9. Repeat steps 7 and 8 two more times with the same pipette.
10. After thorough intermittent mixing, the 204 ml sample is ready for analysis.
11. Perform the analyses within 60 minutes.