

## Certificate of Quality – Trace Metals

This Certificate covers the following product families:

**Optifit Tips**

**Safetyspace® Filter Tips**

### Quality Assurance

The tips have been tested for trace metals by an independent laboratory. The test results are considered typical values and are based on a single-time test. Sartorius considers repeating the test procedure whenever a risk of change in the chemical composition of the tips is identified.

### Test Method

Concentrated nitric acid is aspirated, held for 5 seconds and dispensed in an acid-cleaned sample tube. The procedure is repeated 10 times for each tip. Samples were analyzed using a Nu AttoM SC-ICPMS with a desolvating nebulizer for enhanced sensitivity. Standard solutions were prepared from a multielement stock, and nitric acid blanks were measured before each sample and standard and used for data correction. The analysis was conducted in peak jumping mode. Multiple non isobaric isotopes were used to correct for potential interferences. The data was processed using NuQuant software to determine the limit of detection.



Summary of Results

Table 1. Trace metal concentrations in ppb (µg/l)

| Tip Size                       | Al     | Cr     | Mn     | Ni     | Cu     | Zn     | Cd     | Hg      | Pb    |
|--------------------------------|--------|--------|--------|--------|--------|--------|--------|---------|-------|
| 10 µl                          | 6.902  | <5.291 | <0.172 | <0.886 | 0.911  | 10.227 | <0.501 | <23.247 | 0.127 |
| 10 µl<br>Extended              | 5.609  | <5.291 | <0.172 | <0.886 | <0.692 | 17.735 | <0.501 | <23.247 | 0.059 |
| 200-350<br>µl                  | 3.642  | <5.291 | 0.232  | 1.049  | 0.746  | 13.843 | <0.501 | <23.247 | 0.088 |
| 200 µl<br>Extended             | 4.785  | <5.291 | <0.172 | <0.886 | <0.692 | 9.809  | <0.501 | <23.247 | 0.106 |
| 1,000-<br>1,200 µl             | 15.557 | <5.291 | 0.206  | 2.971  | 1.858  | 19.647 | <0.501 | <23.247 | 0.185 |
| 1,000-<br>1,200 µl<br>Extended | 9.341  | <5.291 | <0.172 | 1.243  | 3.107  | 38.358 | <0.501 | <23.247 | 0.148 |
| 5,000 µl                       | <2.365 | <5.291 | <0.172 | <0.886 | <0.692 | 7.884  | <0.501 | <23.247 | 0.030 |

Values marked with "<" indicate concentrations below the limit of detection of the method.

Helsinki, April 30<sup>rd</sup> 2025

Signed by:

Pia Ojala

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Pia Ojala  
Product Manager  
Sartorius Liquid Handling oy

DocuSigned by:

Tuomas Huhmarniemi

CC6DF5A424E6442...

Tuomas Huhmarniemi  
Head of Quality  
Sartorius Liquid Handling oy