

Certificate of Inspection for Trace Metal

Gilson Diamond® Tips

Quality Statement

The manufacturing lot from which Gilson Diamond® Tips are drawn has been sampled and inspected. The lot number appearing on the package permits traceability and attests to conformity to the highest standards.

To ensure precision and reproducibility, the Gilson Quality Assurance System focuses on the following critical parameters:

- Flash
- Minimal surface retention of water
- Surface smoothness
- Fine point finish.

Gilson Diamond Tips are machine molded by an entirely automatic process, and production is done in an isolated filtered atmosphere. From raw material to packaging, the Diamond Tips are never touched by human hands.

Trace Metal Release: Typical Values

The values indicated were obtained after pipette tips were soaked in concentrated nitric acid for one hour. The solutions were analyzed by spectrometric techniques. The trace element concentrations are expressed in ng/μL.

TIP MODEL (tip volume)	D10/DL10 (10 μL)	D200/D300 (200/300 μL)	D1000/D1200 (1000/1200 μL)	D5000 (5000 μL)	D10ml (10 000 μL)
Aluminum (Al)	0.029 ± 5 x 10 ⁻³	0.017 ± 1.85 x 10 ⁻³	1.9 x 10 ⁻³ ± 1.03 x 10 ⁻³	1.26 x 10 ⁻³ ± 6.2 x 10 ⁻⁴	1.52 x 10 ⁻³ ± 7.15 x 10 ⁻⁴
Cadmium (Cd)	5 x 10 ⁻⁴ ± 3 x 10 ⁻⁴	6.5 x 10 ⁻⁴ ± 3 x 10 ⁻⁴	1 x 10 ⁻⁵ ± 2 x 10 ⁻⁵	4.6 x 10 ⁻⁵ ± 3.6 x 10 ⁻⁵	3.7 x 10 ⁻⁵ ± 1.2 x 10 ⁻⁵
Chromium (Cr)	1.1 x 10 ⁻³ ± 7 x 10 ⁻⁴	3.7 x 10 ⁻³ ± 1.35 x 10 ⁻³	4.4 x 10 ⁻⁴ ± 1.4 x 10 ⁻⁴	6.4 x 10 ⁻⁵ ± 4.2 x 10 ⁻⁵	4.1 x 10 ⁻⁵ ± 3.2 x 10 ⁻⁵
Copper (Cu)	3 x 10 ⁻³ ± 1 x 10 ⁻⁴	0.024 ± 7 x 10 ⁻³	3.27 x 10 ⁻³ ± 7 x 10 ⁻⁴	3.1 x 10 ⁻⁴ ± 8 x 10 ⁻⁵	1.7 x 10 ⁻⁴ ± 1.8 x 10 ⁻⁴
Mercury (Hg)	1 x 10 ⁻³ ± 1 x 10 ⁻³	6.5 x 10 ⁻⁴ ± 5 x 10 ⁻⁴	1.33 x 10 ⁻³ ± 1 x 10 ⁻³	6.4 x 10 ⁻⁴ ± 5 x 10 ⁻⁴	3 x 10 ⁻⁴ ± 2.5 x 10 ⁻⁴
Manganese (Mn)	1.2 x 10 ⁻³ ± 1 x 10 ⁻⁴	1.45 x 10 ⁻³ ± 7.5 x 10 ⁻⁴	1.6 x 10 ⁻⁴ ± 5 x 10 ⁻⁵	6 x 10 ⁻⁵ ± 2 x 10 ⁻⁵	2.6 x 10 ⁻⁵ ± 9 x 10 ⁻⁶
Nickel (Ni)	< 1 x 10 ⁻³ ± 1 x 10 ⁻³	7.5 x 10 ⁻⁴ ± 4 x 10 ⁻⁴	7 x 10 ⁻⁵ ± 1.3 x 10 ⁻⁴	1.2 x 10 ⁻⁴ ± 9 x 10 ⁻⁵	7 x 10 ⁻⁵ ± 4 x 10 ⁻⁵
Lead (Pb)	2 x 10 ⁻³ ± 1 x 10 ⁻³	8.5 x 10 ⁻⁴ ± 1.5 x 10 ⁻⁵	2.3 x 10 ⁻⁴ ± 2 x 10 ⁻⁴	1.46 x 10 ⁻⁴ ± 8 x 10 ⁻⁵	8.5 x 10 ⁻⁵ ± 6 x 10 ⁻⁵
Zinc (Zn)	0.12 ± 0.118	0.013 ± 0.017	0.029 ± 0.027	3.9 x 10 ⁻³ ± 6.14 x 10 ⁻³	1 x 10 ⁻³ ± 1.73 x 10 ⁻³

Accuracy and Precision

Before leaving the factory, Pipetman® pipettes are individually calibrated with Gilson Diamond Tips. Pipetman pipettes are guaranteed to perform within limits for accuracy and precision when used with Gilson Diamond Tips and in accordance with the recommendations of the pipette instruction manual.

Product Designation: DF200ST

Catalog Number: F161100

Lot Number: KEB5/01674