



# INSPECTION FOR TRACE METAL

pipetman® TIPS

DIAMOND Pure Performance Tips!

## QUALITY STATEMENT

A sample from each lot of PIPETMAN DIAMOND Tips is tested 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

PIPETMAN DIAMOND Tips are machine molded by an entirely automatic process, and packaged in an isolated, filtered atmosphere. From raw material to packaging, the PIPETMAN DIAMOND Tips are never touched by human hands.

## TRACE METAL RELEASE (Typical Values)

The pipette tips are tested after having soaked in concentrated nitric acid for one hour. The solutions are analyzed by spectrometric techniques ICP-MS (Inductively coupled Plasma/Mass spectrometry).

The values indicated reflect the concentration of the trace element in each PIPETMAN DIAMOND Tip at its nominal volume. The concentrations are expressed in **ppb**.

| PIPETMAN DIAMOND Tips | Nominal volume (µL) | Value in ppb for each PIPETMAN DIAMOND Tip at its nominal volume |              |               |             |              |                |             |           |           |
|-----------------------|---------------------|--|--------------|---------------|-------------|--------------|----------------|-------------|-----------|-----------|
|                       |                     | Aluminium (Al)   | Cadmium (Cd) | Chromium (Cr) | Copper (Cu) | Mercury (Hg) | Manganese (Mn) | Nickel (Ni) | Lead (Pb) | Zinc (Zn) |
| <b>D10</b>            | 10                  | 270  | <4           | <4            | 18          | <1           | <4             | <5          | 3         | <690      |
| Quantification limit  |                     | 35   | 4            | 4             | 17          | 1            | 4              | 5           | 1         | 690       |
| <b>DL10</b>           | 10                  | 550  | <2           | <2            | 14          | <0.5         | <2             | 6           | 1.0       | <330      |
| Quantification limit  |                     | 20   | 2            | 2             | 8           | 0.5          | 2              | 3           | 0.5       | 330       |
| <b>DL10</b>           | 20                  | 470  | <2           | <2            | 12          | <0.4         | <2             | 5           | 1.0       | <280      |
| Quantification limit  |                     | 15   | 2            | 2             | 7           | 0.4          | 2              | 2           | 0.5       | 280       |
| <b>D200</b>           | 200                 | 130  | <0.5         | <0.5          | 5           | <0.1         | 0.6            | 6           | 1.0       | 110       |
| Quantification limit  |                     | 5  | 0.5          | 0.5           | 3           | 0.1          | 0.5            | 1           | 0.1       | 100       |
| <b>D300</b>           | 300                 | 9  | <0.4         | <0.4          | <2          | <0.1         | <0.4           | <0.6        | <0.1      | <80       |
| Quantification limit  |                     | 4  | 0.4          | 0.4           | 2           | 0.1          | 0.4            | 0.6         | 0.1       | 80        |
| <b>D1000</b>          | 1000                | 11   | <0.4         | <0.4          | <2          | <0.1         | <0.4           | <0.6        | <0.1      | <80       |
| Quantification limit  |                     | 4  | 0.4          | 0.4           | 2           | 0.1          | 0.4            | 0.6         | 0.1       | 80        |
| <b>D1200</b>          | 1200                | <4   | <0.4         | <0.4          | <2          | <0.1         | <0.4           | <0.6        | <0.1      | <90       |
| Quantification limit  |                     | 4  | 0.4          | 0.4           | 2           | 0.1          | 0.4            | 0.6         | 0.1       | 90        |
| <b>D5000</b>          | 5000                | 22   | <0.6         | <0.6          | <3          | <0.2         | <0.6           | <0.9        | <0.2      | <120      |
| Quantification limit  |                     | 6  | 0.6          | 0.6           | 3           | 0.2          | 0.6            | 0.9         | 0.2       | 120       |
| <b>D10mL</b>          | 10000               | 33   | <0.3         | <0.3          | <2          | <0.1         | <0.3           | <0.5        | <0.1      | <70       |
| Quantification limit  |                     | 4  | 0.3          | 0.3           | 2           | 0.1          | 0.3            | 0.5         | 0.1       | 70        |

## ACCURACY AND PRECISION

Before leaving the factory, PIPETMAN® pipettes are individually calibrated with PIPETMAN DIAMOND Tips.

PIPETMAN pipettes are guaranteed to perform within limits for accuracy and precision when used with PIPETMAN DIAMOND Tips and in accordance with the recommendations of the pipette instruction manual.

| Product Designation   | Catalog Number | Lot Number  |
|-----------------------|----------------|-------------|
| DF30ST BLISTER REFILL | F172303        | UBGH3/00020 |

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