

# How to Calculate Sample Results to Surface Area Concentration (mg/m<sup>2</sup>)



Metal samples are extracted in solvent and measured on the analyzer. The concentration of oil is displayed in ppm units. Test results can be converted to mg/m<sup>2</sup> if the surface area is known, which is often required for certain applications.

*This formula converts ppm results to surface area concentration:*

$$\begin{aligned} & \text{Volume of Solvent (mL)} \\ & \times 0.001 \text{ (L/mL)} \\ & \times \text{Concentration (PPM)} \\ & \div \text{Surface Area in sq-mm} \\ & = \text{mg/sq-mm} \\ & \text{Convert to square meters by} \\ & \times 1,000,000 \\ & = \text{Final Result as mg/sq-meter} \end{aligned}$$

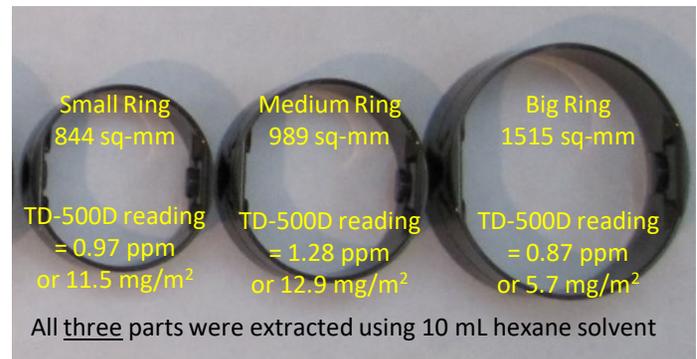
## Oxygen Pump Components

Manufacturer was required to test parts imported from a foreign supplier for potential oil residues. The parts are used to make oxygen pumps used in hospitals for patients having respiratory problems.



## Orifices Used in Heart Valves

Medical company manufactures parts used to make heart valves. The parts are available in different sizes and were washed/treated using a new cleaning system to remove any residual oils used in the process.



## Hospital Ventilation Air Duct

HVAC contractor cleaned ventilation ducts to remove harmful lint and oil. Wipe samples were collected before and after at selected locations to check if the air ducts were sufficiently cleaned.

