

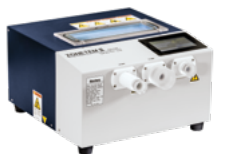
# Sample Preparation and Cross-Section Preparation



ZoneSEM II



ZoneTEM II



# UV-Ozone Sample Cleaner for SEM and TEM

Gentle removal of hydrocarbon contamination

SEM and STEM / TEM users know the problem: High-resolution imaging is often impaired (if not made completely impossible) by the rapid build-up of a carbon film in the observation area. This is usually caused by gaseous hydrocarbons that are continuously deposited during observation due to the energy transfer of the electron beam. The source of these hydrocarbons can be a non-optimal chamber vacuum, which can typically be improved with plasma cleaners with high energy input, or more gently with Hitachi's excimer light source "Sparkle".

In most cases, however, the observation objects and sample holders themselves are the dominant source of contamination. Here, plasma treatment often proves to be too rough in the sense of altering or even destroying the sample. Hitachi's ZONE cleaners for SEM and TEM offer a gentle, clever alternative based on ultraviolet light and free oxygen radicals: fast and thorough removal of interfering hydrocarbons with significantly reduced energy input compared to plasma cleaners.

The sample cleaners in the ZONE product family are equipped with UV lamps with wavelengths of 185nm and 254nm, which attack typical hydrocarbon bonds, break up oxygen molecules and generate reactive components in the form of ozone.

The integrated diaphragm pump generates an adjustable moderate vacuum between 13 and 67kPa. The chamber pressure can be used to optimise the cleaning mechanism between more oxidative or more physical depending on the type of sample.

## ZoneSEM II



### Product Features

- For samples up to 100mm Ø and 37mm high
- Cleaning and storage function
- Recipe memory
- Typical process times 5-15 minutes

## ZoneTEM II



### Product Features

- Access for up to 5 TEM sample holders (configurable)
- Cleaning and storage function
- Recipe memory



## Not sure which product aligns with your needs?

Our experts are here to provide guidance and help you make the best choice.

[Speak with an expert >](#)

### More information

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**Email:** [hte-ask@hitachi-hightech.com](mailto:hte-ask@hitachi-hightech.com)