

# Outgas Analysis for Wafer Industries

## Measurement of Cleaning Ratio of the Organics on the Wafer

The below procedure (Fig. 23) shows cleaning method for present and a new method by megasonic cleaning. At the numbered positions, the cleaning ratios were measured by using outgas collector and GC/MS.

|  |                       |              |
|--|-----------------------|--------------|
| Cleaning position                              | Number is the Fig. 23 | Chromaiogram |
| Between the Bare and the CW :                  | (1) and (2)           | Fig. 24      |
| Between the TMS and the Remove SPH :           | (3) and (4)           | Fig. 25      |
| Between the TMS and the Remove SPM/megasonic : | (3) and (6)           | Fig. 26      |

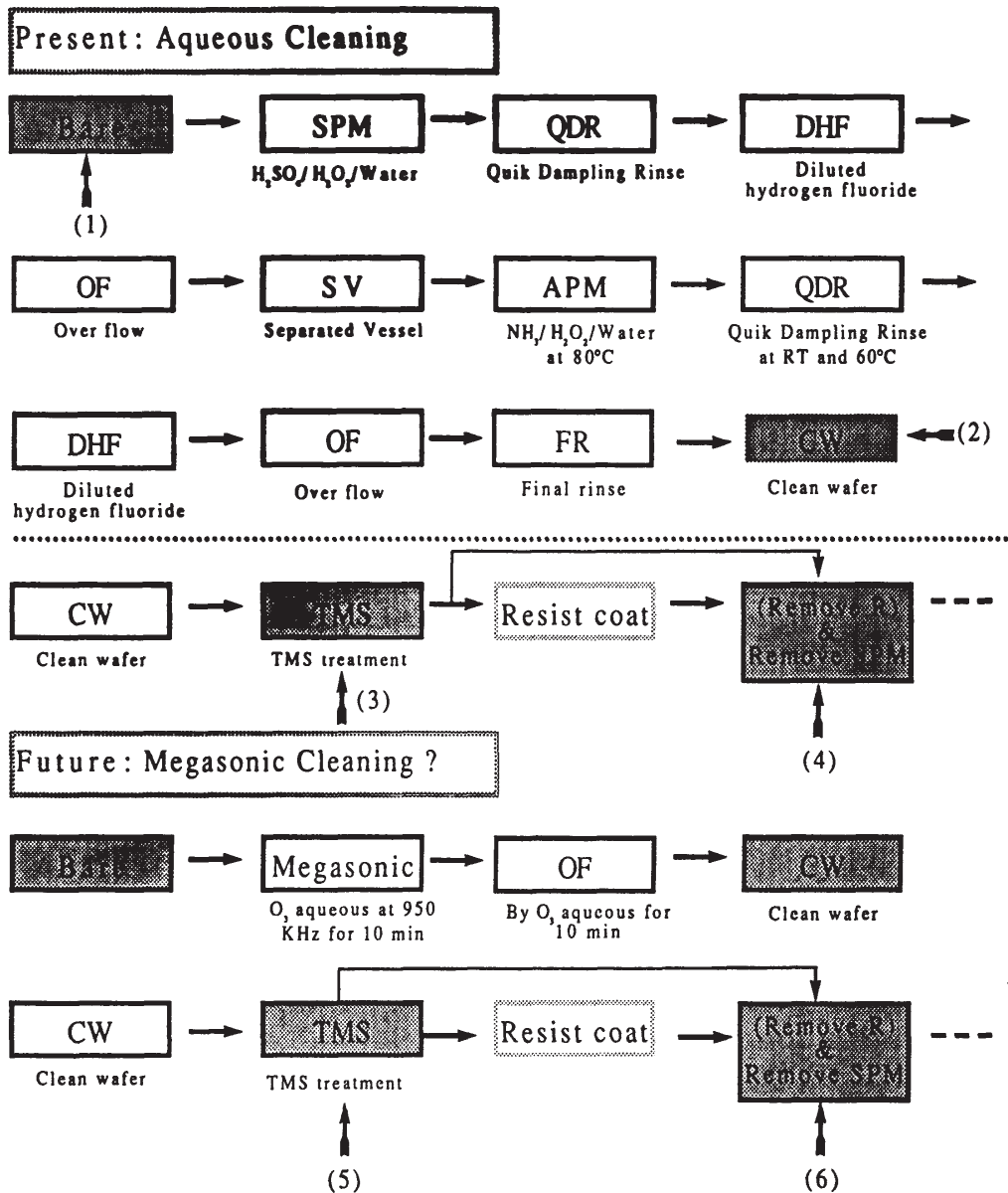


Fig. 23 Cleaning procedures

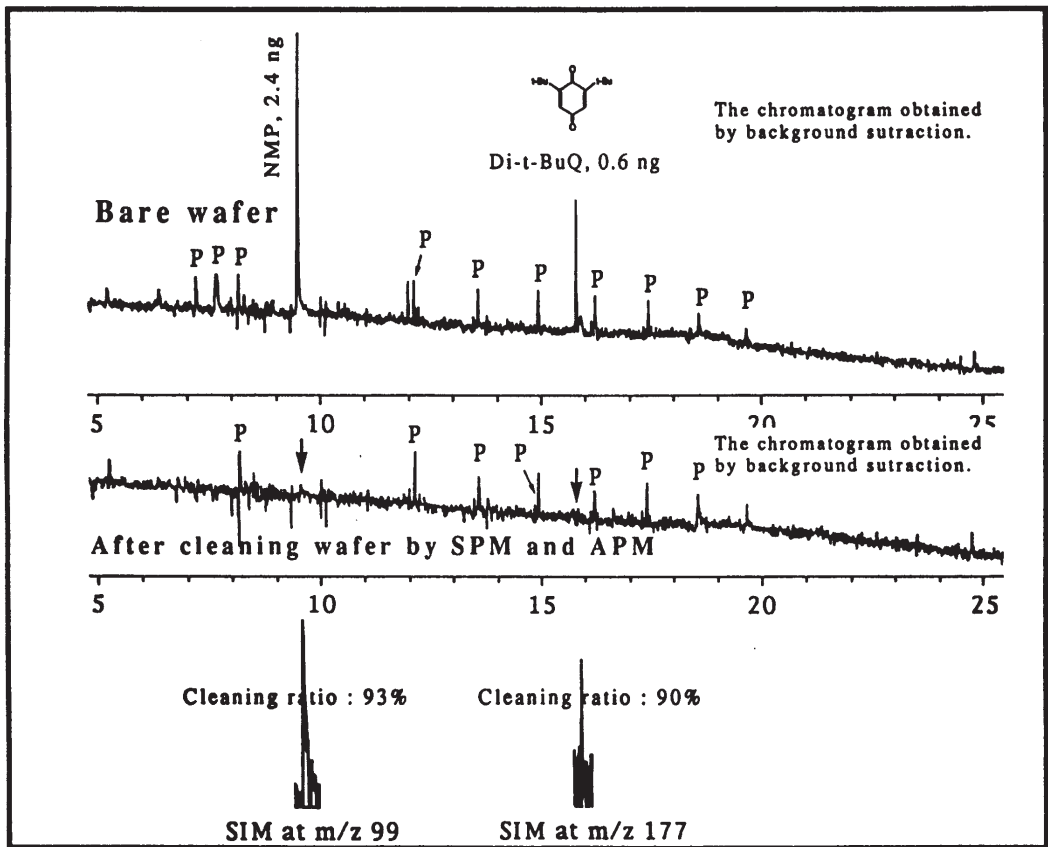


Fig. 24 Measurement of cleaning ratio of between the Bare and the CW at the position of (1) and (2) in Fig. 23

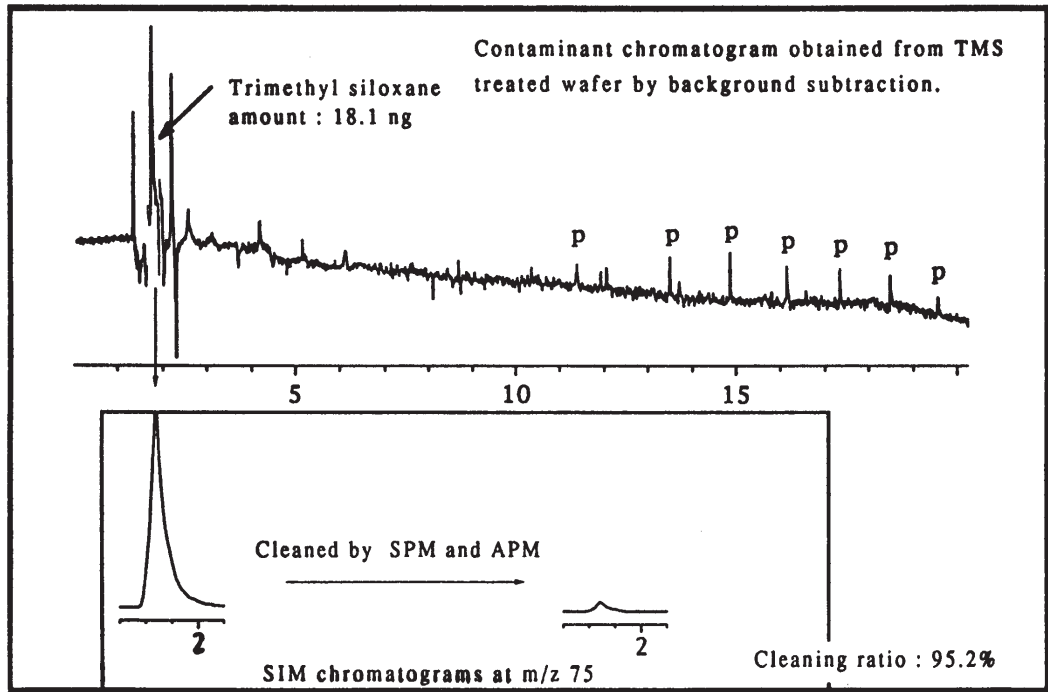
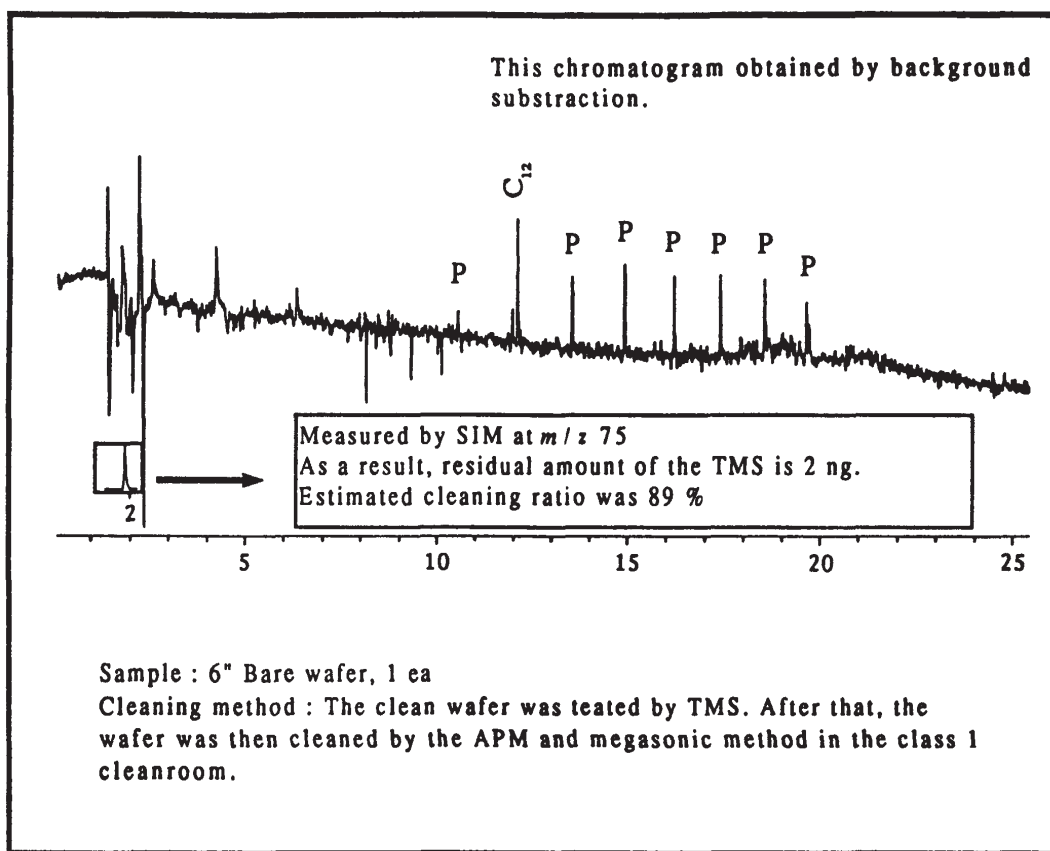


Fig. 25 Measurement of cleaning degree of the between the TMS and the Remove SPM at the position of (3) and (4) in Fig. 23



**Fig. 26 Measurement of cleaning dgree of between the TMS and the Remove SPM by megasonic cleaning at the position of (5) and (6) in Fig. 23**

Analytical condition

Sampling area : 6" diameter.

Thermal extraction temp. : 250°C for 30 min.

Adsorbent : Tenax GR, 2.5 g for PAT, Glass wool forSAT at -60°C.

Column : DB-Sms0.2S mm x 30m. Flow rate : 1 ml/min. Column temp. : 40°C(3 min)-280°C, 10°C/min.

Instruments : SW-8, JHS-100A-GC/MS, Split ratio : 1/10