

Extraction Efficiency of Cu Ion on CZ Si Surface by Scanning Solution

K-C Cho, J-M Park, Y-G Lee, S-C Kang

Samsung Electronics

It is well known that micro contamination analysis of CZ Si wafer surface is essential to obtain good device yield and reliability. Scanning solution used to analyze the Si wafer surface contaminated by Cu was HF, HNO₃:HF(mixed acid 1), HNO₃:HF(mixed acid 2, HNO₃ rich) and HF+H₂O₂. To evaluate scanning extraction efficiency of each scanning solution, TRXRF and AAS were used. The order of scanning extraction efficiency was HF+H₂O₂ > HNO₃:HF(mixed acid 1) ≥ HNO₃:HF(mixed acid 2, HNO₃ rich) > 1% HF.

References

1. J. Ryuta, T. Yoshimi and H. Kondo, *Jpn. J. Appl. Phys.*, **31**, 2338 (1992).
2. T. Ohmi, T. Imaoka, T. Kezuka, J. Takano and M. Kogure, *J. Electrochem. Soc.*, **140**, 811 (1993).
3. H. Kikuyama, M. Waki, M. Miyashita, T. Yabune and N. Miki, *J. Electrochem. Soc.*, **140**, 366 (1994).
4. T. Ohmi, T. Isagawa, M. Kogure and T. Imaoka, *J. Electrochem. Soc.*, **140**, 804 (1993).