

Quick insight in Taiwan

PFAS in semiconductor industry

Why PFAS matters in semiconductor manufacturing

Machines must 'behave,' not because of luck but because semiconductor manufacturing demands absolute precision. Producing advanced chips requires extremely clean environments. Any contamination affects yield and reliability.

PFAS plays a critical role in this process, including:

- Photoresist and lithography materials
- Fluorinated etching gases
- High purity fluoropolymer coatings
- Ultrapure water systems and process components

As global attention to the environmental and human health risks associated with PFAS continues to grow, Taiwan has strengthened its regulatory oversight of these persistent chemicals, with more than 500 PFAS substances already subject to management controls. This regulatory momentum is accelerating the search for PFAS-free alternatives across supply chains. In response to increasingly stringent regulatory requirements, industries are placing greater emphasis on PFAS monitoring, contamination source identification, and regulatory compliance. Consequently, rapid and reliable PFAS detection and contamination source identification are now key priorities for the semiconductor industry.



Meet the SCIEX expert:

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Fun fact

Taiwan's famous lucky charm snack



In Taiwan's labs and high-tech factories, a popular snack called "Kuai Kuai" is placed on machines as a lucky charm to keep instruments running smoothly. Even semiconductor fabs join in on this long-standing engineering tradition.

Integrated PFAS testing solutions:

SCIEX and Phenomenex deliver high-sensitivity solutions for detecting and monitoring PFAS—persistent contaminants found in water, soil, food, and biological systems—helping labs meet global regulatory demands with confidence.

PFAS analysis solutions

Learn more on applications of LC-MS/MS in semiconductor manufacturing processes

Learn more

References

cha.gov.tw/cp-193-6996-8e186-2.html

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