

KIO3 20 g/L

MILESTONE APPLICATION NOTE FOR MERCURY DETERMINATION HG/CH-05



SUMMARY

Precise and rapid determination of total mercury in KIO3 can be performed using Direct Mercury Analyzer. Such an instrument requires no sample wet chemistry or pre-treatment. Once a weighed sample portion is introduced into the instrument, analysis is completed in six minutes. Direct analysis of mercury, using the integrated sequence of Thermal Decomposition, Catalyst Conversion, Amalgamation, and Atomic Absorption Spectrophotometer, is described in EPA 7473 and is validated for laboratory as well as field analysis.

INSTRUMENTATION

Milestone DMA-80 evo, 640-1640 terminal with DMA-80 software or DMA-80 PC software, metal boats.

Analytical balance, spatula, pipette, or appropriate mechanical pipette and volumetric flask (Class A), 50 or 100 ml.



SAMPLE WEIGHT

Up to 50-100 mg (max).

ADDITIVE

Aluminum oxide, activity grade: Super I

Subject to change without notice.

For additional information please contact application@milestonesrl.com

PROCEDURE

1. Place a boat on the balance plate, tare it and weigh 500 mg of Additive.
2. Add the sample.
3. Introduce the boat into sample tray.
4. Run the DMA-80 program to completion.

DMA-80 PROGRAM

N° step	Time	Temperature
1	00:01:00	200°C
2	00:02:00	650°C
3	00:01:00	650°C

Max start temp: 200°C. Purge: 60 sec

RESULTS

N°	µg/kg
1	10.05
2	10.08
3	10.21
4	11.17
5	10.37

Avg: 10.38 µg/kg SD: 0.41 µg/kg RSD: 3.99 %

CONCLUSION

The DMA-80 evo Mercury Analyzer successfully processed KIO3 sample. Total analysis time per sample was less than 7 minutes, including the time employed to weigh each sample into the boat.

