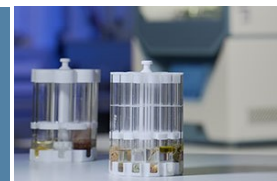


# CERIUM OXIDE (CeO<sub>2</sub>)

MILESTONE ultraWAVE 3 METHOD #ME-03-06



## I SUMMARY

This method provides the acid digestion of the sample in a Single Reactor Chamber (SRC) using temperature control and microwave heating for the metal determination by spectroscopic methods.

## I INSTRUMENTATION FOR DIGESTION



Milestone ultraWAVE 3 with internal temperature and pressure control in all vessels, built-in touchscreen with easyCONTROL software installed.

## I RACK AND VIALS TYPE

Rack	Vial
7 pos	PTFE, Quartz or Glass

## I SAMPLE AMOUNT AND REAGENTS

Rack	Sample amount	Reagents
7 pos	0,05 g	4 mL HCl, 3 mL H <sub>2</sub> SO <sub>4</sub>

## I BASE LOAD

120 mL of DI H<sub>2</sub>O, 5 mL of HNO<sub>3</sub> 67%

## I TYPE OF GAS AND STARTING PRESSURE

Gas Type	Load pressure
Nitrogen gas	40 bar
Argon Gas	40 bar

Milestone suggests gas purity of 4.7. For trace metal analysis the purity of 5.0 is highly recommended

## I MICROWAVE PROGRAM

Step	Time (min)	Power (W)	T1 (°C)	T2 (°C)	P (bar)
1	00:25:00	1500	270	60	110
2	00:30:00	1500	270	60	110

## I NOTES

- Be careful to handle the acid mixture H<sub>2</sub>SO<sub>4</sub>+HCl since they can react very violently: Milestone strongly recommend to slowly add the acids drop by drop.
- For details on the operating steps with ultraWAVE 3, see the user manual and video tutorials on Milestone Connect.
- Cleaning /maintenance procedure must be executed following the user manual, video tutorial and installer instructions.
- This procedure is only a guideline and it may need to be modified or changed to obtain the required results on your sample.