LAKE SEDIMENT (SRM B5-B6)

MILESTONE ultraWAVE METHOD #LAB8

| 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.

| INSTRUMENTATION FOR DIGESTION

Milestone UltraWAVE with internal temperature and pressure control in all vessels, 660 terminal with easyCONTROL software installed.

| RACK AND VIALS TYPE

Rack	Vial
15 pos	PTFE

| SAMPLE AMOUNT AND REAGENTS

Rack	Sample amount	Reagents
15 pos	0,05 g	4 mL HNO_3, 2 mL H_3PO_4, 2 mL HBF_4*, 1 mL H_2SO_4

*For HBF4, see the “procedure for HF complexation”.

| BASE LOAD

150 mL of DI H_2O, 5 mL of HNO_3 67%

| TYPE OF GAS AND STARTING PRESSURE

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

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

| MICROWAVE PROGRAM

Step	Time (min)	Power (W)	T1 (°C)	T2 (°C)	P (bar)
1	00:25:00	1500	260	60	110
2	00:15:00	1500	260	60	110

| NOTES

- For details on the operating steps with ultraWAVE, 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.
- Use the PTFE (MCL0699A) discs for high temperature applications.
- Use the PTFE protection for thermowell (P/N MCL0664A).