

Application field: Rock

Summary

This method provides for the acid digestion of rock sample using hot block digester.

Equipment

LabTech ED36 hot block digester and digestion tube (PTFE)

Reagent

1. HCl: $\rho=1.19\text{g/ml}$, GR
2. HNO_3 : $\rho=1.42\text{g/ml}$, GR
3. HF: $\rho=1.49\text{g/ml}$
4. HClO_4 : $\rho=1.68\text{g/ml}$, GR

Procedure

1. Add 0.2g rock powder sample, 12ml mixing acids ($\text{HNO}_3:\text{HCl}=1:3$) and 2ml HF to digestion tube and close the tube.
2. Insert the digestion tube into the cavity of ED36.
3. Setting the temp. of ED36 to 100°C and run the heating program.
4. Set the temp. of ED36 at 100°C and run the heating program for approx. 120min.
5. Let the tube cool to ambient temp and add 3ml HClO_4 .
6. Reset the temp. of ED36 to 140°C .
7. Continuously heating 2h and let the tube cool to ambient temp.
8. The solution is available for analysis after filtration.

Notes

Appropriate digestion time and acid proportion are both important for good digestion result due to the component are various in different rock samples.

ED36 can precisely control the digestion temperature and provide high sample-to-sample uniformity. It's a kind of easy and simple way to digest multiple samples.

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