Analogue experiment of Lava flow using Polyethylene Glycol 600

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We will discuss for this analogue experiment on both view from two simulating of lava flow morphology and training for design of analogue experiments.

Simulations of lava flow morphology:

In laboratory experiments designed to model lava flow, polyethylene glycol is forced through narrow chub onto the base of a tank of cold water, where it spreads laterally while cooling and solidifying at its surface (Gregg and Fink, 1995, Fink and Griffiths, 1992 and so on). We observe the surface structure and the aspect ratio of polyethylene glycol lava, and its dependence on the flow rate, chub diameter and thermal condition.

Training for design of analogue experiments:

We gets a deep impression from this analogue experiment at first experiment, though little understanding by preparations. We determined measurement parameter at second and third experiment based on the previous experimental result by our-self.

Comments:

We hope to get experience of this experiment as invitation to geo-science at high school or junior high school, because of simple setting of this experiment and good impression with feel of Polyethylene Glycol.