

Q&A of USS-DVT Rotary Viscometer

Newtonian fluid: get same results no matter at different speeds or with different rotors.

non-Newtonian fluid:

Testing results are different at same speed with different rotors. [error <5%]

Testing results are different at different speeds with same rotor. [error <5%]

Q: How do we know if this solution is a Newtonian fluid?

A: If we get same results no matter at different speeds or with different rotors, then the solution is a Newtonian fluid, or it should be non-Newtonian fluid.

Q: How can this device be used with Newtonian fluids?

A: We can get same results no matter at different speeds or with different rotors. [error <5%] If testing error is over 5%, calibrate the machine with silicone oil. If we still get different results after calibration, that means there is some wrong. Please kindly send it back for a replacement or a full refund.

Q: How can this device be used with non-Newtonian fluids?

A: Try different rotors at same speed, or try the same rotor at different speeds. Try to get the result when PERCENT is close to 50%.

For example

result	percent	
A	40%	
B	30%	
C	48%	√

result	percent	
A	30%	
B	60%	√
C	70%	

result	percent	
A	60%	√
B	70%	
C	80%	

Q: How can measurements be compared across samples?

A: By using same rotor at same speed & same temperature, we can compare viscosity samples.

Q: How do we know which rotor/speed to use and which is accurate? Or will it only give relative values? *How should we decide which rotor/speed combination to use? For solutions closer to the viscosity of water and those closer to the viscosity of snot.

A: There are four rotors in the packaging. No. 4 can be used to higher viscosity liquid, while No. 1 or #0 can be used to lower viscosity liquid. (1<2<3<4)

Q: We have solutions with a range of viscosities. If we have to use one or two rotor/speed combinations, can those be compared?

A: This is incomparable according to the features of liquids.