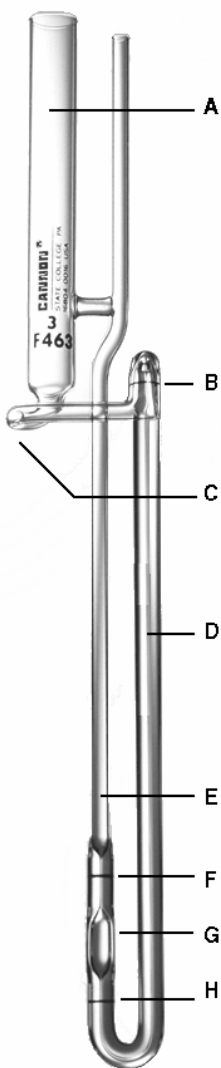


Instructions for the use of The Zeitfuchs® Cross-Arm Viscometer



See also ASTM D 445, D 2170, D 446, and ISO 3105

1. Clean the viscometer using suitable solvents, and dry by passing clean, dry, filtered air through the instrument to remove the final traces of solvents. Periodically, traces of organic deposit should be removed with chromic acid or non-chromium cleaning solution.
2. If there is a possibility of lint, dust, or other solid material in the liquid sample, filter the sample through a fritted glass filter or fine mesh screen.
3. Mount the viscometer in a vertical position in a constant temperature bath. Self-aligning metal holders, either rectangular or round, can be cemented to the viscometer, and the holder fastened to the constant temperature bath lid.
4. Pipette or pour the sample into tube A of the clean dry viscometer until the leading edge of the meniscus flows through the cross-arm and up to mark B. After temperature equilibrium has been established, adjust the level of the meniscus at B by adding or removing a few drops of sample through tube A.
5. Allow approximately 10 minutes for the sample to come to the bath temperature.
6. To measure flow time, apply slight suction to tube E (or slight pressure to tube A) to start flow over siphon through capillary D. Measure the time for the leading edge of the meniscus (this may be at the wall for the lower viscosity sizes and at the center for higher viscosity sizes) to pass from timing marks H to F. Bulb G is on the left side as shown for sizes 1 through 6, and on the right side for sizes 7 through 10.
7. A check run can be made by repeating steps 1 through 6.
8. Calculate the kinematic viscosity of the sample by multiplying the fill time by the viscometer constant.

Zeitfuchs Cross-Arm Viscometer For Opaque and Transparent Liquids

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RECOMMENDED VISCOSITY RANGES FOR THE ZEITFUCHS® CROSS-ARM VISCOMETER

Size	Kinematic Viscosity Range		
	mm ² /s ² (cSt/s)		mm ² /s. (cSt)
1	0.003	0.6	to 3
2	0.01	2	to 10
3	0.03	6	to 30
4	0.1	20	to 100
5	0.3	60	to 300
6	1.0	200	to 1000
7	3.0	600	to 3000
8	10	2000	to 10000
9	30	6000	to 30000
10	100	20000	to 100000

The expanded uncertainty with 95% confidence of the calibration measurements relative to the primary standard is as follows:

Range of Constants mm ² /s ²	Expanded Uncertainty
up to 5	±0.34%
5 to 50	±0.45%
Greater than 50	±0.69%

The assigned accuracy of the primary viscosity standard at 20°C is ±0.17%. See ISO 3666.

THIS PRODUCT WAS CALIBRATED WITHIN A QUALITY SYSTEM WHICH IS REGISTERED TO ISO 9002.

CANNON INSTRUMENT CO.

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