

used had an inner diameter d of 0.50 mm, and a length l of 130.2 mm. Measurements recently made with the same capillary on the fresh solution are presented in fig. 1, below, by full circles. Open and full squares give the results of measurements on the same

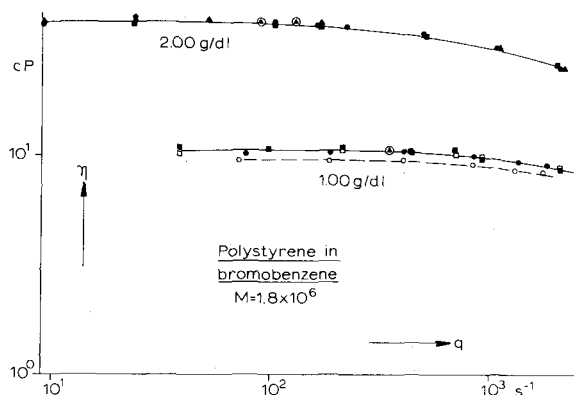


Fig. 1. Solution viscosity against the shear rate at the capillary wall for two solutions of narrow distribution polystyrene in bromobenzene at 25 °C. Measurements with capillary rheometer at concentration $c = 1.00 \text{ dl/g}$: \circ = old solution, measured with a glass capillary with $d = 0.50 \text{ mm}$; $l = 130.2 \text{ mm}$; fresh solution: \bullet same glass capillary; \blacksquare and \square : steel capillaries with $d = 0.62 \text{ mm}$; \blacksquare $l = 180.9 \text{ mm}$; \square $l = 80.3 \text{ mm}$. Ditto on a fresh solution at $c = 2.00 \text{ g/dl}$ with steel capillaries of $d = 0.99 \text{ mm}$; \bullet $l = 79.9 \text{ mm}$; \blacksquare $l = 140.0 \text{ mm}$; \blacktriangle $l = 180.0 \text{ mm}$. \odot Measurements with Ubbelohde viscometers on fresh solutions.

solution made with steel capillaries of $d = 0.62 \text{ mm}$ and $l = 80.3$ and 180.9 mm , respectively. The encircled triangle gives the result of a measurement on the fresh solution, made with an Ubbelohde viscometer.

There is good agreement between the results of all measurements made on the fresh solution; this indicates that no end-effects are noticeable in any of these measurements. The results of the previous measurements with our rheometer (1) are clearly too low. Probably the concentration of the solution used in these measurements was lower than 1.00 g/dl .

Good agreement between the results of measurements with different capillaries and Ubbelohde viscometers was also obtained for a 2.00 g/dl solution of the same sample of polystyrene in bromobenzene, as is also shown in fig. 1.

Reference

- 1) Daum, U. and H. Janeschitz-Kriegl, Rheol. Acta 7, 349 (1968).

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Berichtigung

zu

An integral rheological model and its application in steady and unsteady viscoelastic data of a polyisobutylene-dekahydronaphthalin solutions

By J. David (Praha)

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The heading of first column of table 1 should read correctly

Relaxation time constant
 \times relaxation modulus
 $\lambda_n G_n$ (poise)
