

needle
valve
burets*

now with
Kimble tubes!

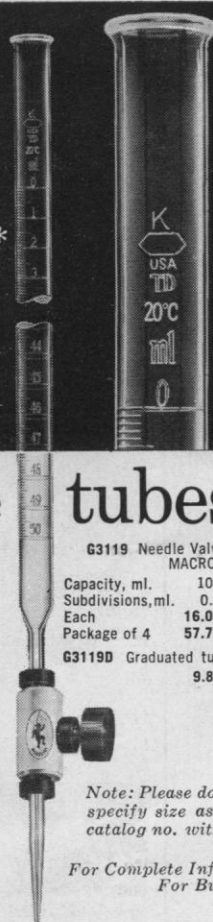
One of the most significant developments in buret history, the Manostat Needle Valve Buret, is now available with Kimble Tubes. Now you can perform your titrations without annoyance of stopcock adjustments.

This new instrument provides fine needle valve control of liquid flow, eliminating crude, annoying stopcock grease contamination.

The Buret tubes are accurately calibrated to the closest tolerances, and a permanent fused-in ceramic scale insures lifetime graduations.

*Patent Applied For

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G3119 Needle Valve Buret Complete
MACRO SIZE

Capacity, ml.	100	50	25	10
Subdivisions, ml.	0.2	0.1	.05	.02
Each	16.05	11.70	12.45	12.45
Package of 4	57.78	42.12	44.82	44.82

G3119D Graduated tube only				
	9.80	5.50	6.20	6.20

Note: Please do not fail to specify size as well as catalog no. with your order.

For Complete Information Write For Bulletin

The Beginnings of Embryonic Development

AAAS Symposium Volume No. 48

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R. C. von Borstel, Oak Ridge National Laboratory

Charles B. Metz, The Florida State University

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A symposium on "Formation and Early Development of the Embryo", held 27 December, 1955, at the Second Atlanta Meeting of the AAAS, served as the basis for this volume. Emphasis was placed on the problems of early development and of the initiation of development. The investigations presented in the various communications cover both descriptive and experimental work on the biological and chemical levels. Apart from their intrinsic interest and the measure of progress that they provide, the specific discoveries and analyses presented serve to exemplify various approaches toward the understanding of the manner in which sperm and egg contrive to produce a new individual.

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note that some early tests to determine the best location of a regulator (which indicated a location within the lungs) involved diving in a medium more dense than water and moving the regulator up or down to the most comfortable position relative to the body. An acceleration field effectively increases the density of the liquid and the compensating weight at the same rate, and so the required weight does not change as it would have to for diving in a different medium.

The concept of a "center of pressure" for the lungs, at which a regulator should effectively be positioned, probably loses much of its significance if a great pressure difference exists across the chest itself. (For example, one might expect difficulty in trying to breathe under mercury.)

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Strontium Content of Human Bone

In the issue of 1 August [*Science* **128**, 256 (1957)], Thurber, Kulp, Hodges, Gast, and Wampler report on their measurements on the common strontium content of human bones from urban populations. They deduce a ratio of Sr to Ca in bone of $(0.45 \pm 0.1) \times 10^{-3}$. Combining this with the figure they quote for the same ratio in average soil, one obtains a discrimination factor of 16 ± 4 , which has a significantly higher error than they quote.

This perhaps makes less disturbing the discrepancy between their measured discrimination and the one which can be calculated on the basis of the discrimination factors they quote for the various biological systems. Using these numbers—namely, human calcium half derived from vegetation and half from milk, plant-to-soil discrimination equal to unity, plant-to-milk discrimination equal to 7, and milk or vegetation to human bone discrimination equal to 4—one estimates the over-all discrimination between soil and human bone to be about 7 (not 16 as quoted in the report). A discrepancy of a factor of 2 is perhaps not surprising in view of the roughness of the numbers and the simplifying assumptions which have been made.

The factor of 16 ± 4 is certainly an encouraging sign, but its relative constancy in these measurements, as Thurber *et al.* point out, is largely a function of the averaging of food sources in a modern urban environment. It would be interesting to see similar measurements on bones from isolated rural populations in calcium-rich and calcium-deficient regions.

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