

In mechanical shock induced by obstruction to the venous return to the heart, the over-distention is due to a draining back of the blood within the capillaries. In inhibitory shock, the over-distention is due to the sudden discharge of blood at high pressure into the capillaries. In either case, the effect upon the capillary wall is the same, and shock would therefore consist in a general displacement of what might be termed a critical quantity of blood from the arterial to the capillary and venous side of the circulation, a displacement which is therefore accompanied by comparatively insignificant volumetric changes and dependent largely upon a loss of a normally existing tone in the walls of the small venules and capillaries.

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On the application of the Kjeldahl method of nitrogen determination to serological problems. (Preliminary note.)

By **BYRON W. BARSHINGER.** (By invitation.)

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Practically no variation in the nitrogen content of rabbit serum (centrifuged) is produced by the usual variations in temperature at which the blood sample (sealed) is kept during the initial separation of the serum. Sera separated in the incubator, ice chest and at room temperature are identical, within the limits of the experimental error.

An increase of as much as 100 per cent. in nitrogen content may be brought about by increasing the length of time the serum is allowed to stand in contact with the clot. This increase is most rapid and most pronounced in samples kept at incubator temperature.

Variations as great as 40 per cent. may be observed in different samples removed from the same rabbit at the same bleeding. Small consecutive samples drawn at five-minute intervals may show differences as great as 10 per cent.

Variations as great as 40 per cent. above or below the average may be observed in sera of normal rabbits of the same age, size and breed, kept and bled under identical conditions.