exchange, but by the addition of excess Fe^{+3}. The relative affinities of EDTA for Ga^{+3} and Fe^{+3} and their relative concentrations are such that, upon neutralization of an acid solution containing these species, the EDTA will chelate Fe^{+3} preferentially. However, the method does not appear to apply to the preparation of gallium chelates. To label by chelation, the desired chelating agent must first be added to the acidic solution containing Fe^{+3}, Ga^{+3}, and EDTA. Following neutralization, in addition to the desired chelate, the solution will contain GaEDTA, mixed complexes containing both Ga^{+3} and Fe^{+3}, and colloidal forms of $Fe(OH)_3$ with coprecipitated gallium. Since my publication was intended to describe a method for the preparation of chelated rather than particulate forms of ^{68}Ga, I felt that specific reference to the work of Prof. Colombetti and his associates was inappropriate.

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LAMINAR FLOW

Karran et al in their paper on colloid uptake in rat liver (*1*) made a common error in using the term "laminar flow." Laminar flow has a rather specific meaning in fluid flow dynamics (*2,3*). The layer of fluid in contact with a stationary surface does not move and those above it flow with incrementally larger velocities. This is related to the viscosity of the fluid (Fig. 1A).

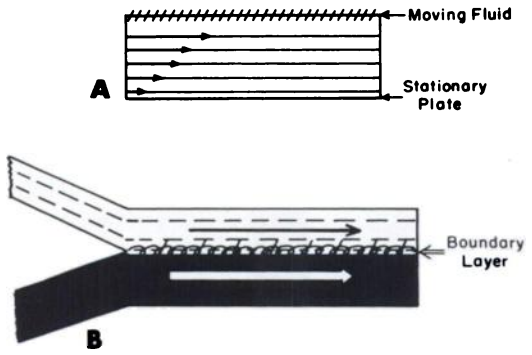

FIG. 1. (A) Laminar flow model: Contact plane is stationary and each infinitesimally small layer above moves at greater velocity. (B) Streaming model: Two streams only mix slightly at their interface (boundary layer).

The authors were really describing streaming effects. These phenomena of nonmixing are related to inertia and bulk flow. Streaming effects are common in biologic systems, as, for example, in the preferential flow of the inferior venacaval blood in the fetus across the foramen ovale. Some mixing takes place at the interface of the two streams, but this is not complete (Fig. 1B).

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