1. It was recorded that "newton" was finally adopted as the name for the unit of force in the Giorgi system.

2. The ampere was adopted as the fourth principal unit of the Giorgi system.

3. The so-called total rationalization of the Giorgi system was adopted.

4. An Experts Committee was set up to study the rationalization process and prepare questions to be considered at the next meeting.

Although such recommendations of the I.E.C. can have no legal force, they will doubtless be used by many engineers and writers of textbooks as a guide to preferred practice. It is very fortunate that Professor de Boer could participate in the meetings last July and is (as observer) a member of the Experts Committee.

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## Cobalt 60 Labeled Vitamin $B_{12}$ of High Specific Activity

A recent report (Chaiet, Rosenblum, and Woodbury, *Science,* **111,** 601 [1950]) described the microbial synthesis and isolation of crystalline vitamin $B_{12}$ labeled with cobalt 60. The specific activity of this preparation was $\simeq 0.25$ μc/mg. The specific activity of the vitamin is determined by the specific activity of the cobalt added to the nutrient medium, by the extent of utilization of cobalt naturally present in the medium, and by the cobalt content of vitamin $B_{12}$. The highest specific activity cobalt 60 obtainable from the U. S. Atomic Energy Commission is an amount of 2,000 μc/mg ("Isotopes," *Catalog and Price List No. 3,* [July 1949]). The cobalt content of vitamin $B_{12}$ has been reported variously as 4.5% (Brink, N. G., *et al., J. Amer. Chem. Soc.,* **71,** 1854 [1949]) and 4.0% (Fantes, K. H., *et al., Proc. Royal. Soc. London,* **136–B,** 592 [1949]). Assuming the 4.5% figure, and ignoring the possibility of an inactive cobalt (59) contribution from the broth, the maximum specific activity currently attainable is 90 μc/mg vitamin.

In more recent experiments we have been able to approach this maximum. Starting with cobalt 60 (purchased as the nitrate from Tracerlab, Inc., on allocation from the AEC) of specific activity 1.800 μc/mg added to the nutrient medium, we obtained a product with a specific activity of $\simeq 67$ μc/mg. The highest specific activity expected was 72–81 μc/mg, depending on the value (4% or 4.5%) taken for the cobalt content of vitamin $B_{12}$. Despite the uncertainty in the cobalt content of vitamin $B_{12}$, it thus appears that the added cobalt is utilized by the microorganism, and that only 7–17% of the cobalt that was incorporated in the radioactive vitamin originated in the raw broth. This finding that bivalent cobalt ions can be utilized by microorganism is in accord with the observation (Hendlin and Ruger, *Science,* **111, 541** [1950]) that addition of cobalt salt to synthetic media increases the yields of $B_{12}$, and with the report (Abelson and Darby, *Science,* **110,** 566 [1949]) that a radioactive compound, presumably $B_{12}$, can be isolated from the feces of sheep fed inorganic cobalt 56.

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## Operation Lamprey

This is to report an observation on lampreys that strikes me as being interesting rather than significant, but unparalleled in the field of general zoology. As is commonly known, the parasitic lampreys attack fish, rasp a hole in the flesh, and suck out the blood and tissue juices. If the lamprey attaches itself on the thick dorsal body wall the wound ordinarily heals after the lamprey releases its victim, and the fish usually survives. A distinctive sort of scar results. If, however, the attachment is made to the ventral body wall, the wound in most cases penetrates into the body cavity. This circumstance is almost always promptly fatal to the fish. In terms of surgery, the lamprey has performed a crude sort of laparotomy.

Clarence H. Kennedy, of the Department of Zoology and Entomology here, has told me of an observation he made several years ago on an 18-inch pike, *Esox reticulatus* Le Sueur or *E. lucius* L., which he had taken from Cayuga Lake, near Ithaca, New York. This pike had been attacked by a lamprey, presumably *Petromyzon marinus* (land-locked), about an inch directly craniad to the anus on the midventral line. The wound had been formed through the body wall, mesentery, and intestine and had then healed in such a manner as to form an opening into the gut without exposing the peritoneal cavity. The open character of the wound caused it to act as the outlet of the intestine and the original anus now appeared to be nonfunctional. Here, then is an example of a piece of difficult surgery being performed by a member of the most primitive class of vertebrates on an individual several "notches" advanced phylogenetically. Obviously, this was a case of accidental and unintentional colostomy that was startling to the pike if not to the lamprey.

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