

carried out using blood cultures and urine samples. After the addition of the bacteria (*E-coli*) to 1 ml of sterile serum, 5 μ Ci of uniformly labeled ^{14}C -glucose was added, and the culture was incubated at 37°C. Radioactive carbon dioxide ($^{14}\text{CO}_2$) released from culture was measured automatically with chart-recorder and electronic counter.

The counting rate of $^{14}\text{CO}_2$ was increased after a 2 hour of incubation time while the culture was agitated continuously. However, the content of $^{14}\text{CO}_2$ released from the culture was less without continuous agitation.

The culture vial which is used for automatic sequentia sampling of many samples was also reported.

A Scintillation Probe for Efficient Counting of Low Energy Beta Rays in the Elution from Liquid or Gas Chromatographs

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A counting system is presented for the continuous scanning of soft beta ray emitters in the eluate from liquid or gas chromatographic columns. A relatively small portion of the column stream is diverted through the counting system while the main portion is passed through a light absorbance measurement and recording device to a fraction collector. The stream to be counted is mixed with liquid scintillator by cavitation and then nebulized into the counting chamber using a suitable gas to give a counting efficiency equivalent to that of vial counting. No change in efficiency was noted for easily soluble material in organic solvents when nebulization

and cavitation for more complete emulsification were omitted from the system. Radioactive counts and absorbance measurements can be plotted simultaneously on a chart recorder. The convenience and efficiency of the system was demonstrated by the recording of the counting and absorbance data for an aqueous elution of ^{14}C -cytidine and ^3H -uridine from a Dowex column. A few experiments are demonstrated for the explanation that advantages involved herein are of great use for continuous scanning of expiratory $^{14}\text{CO}_2$ and controlling of radioactive dust concentration in an automatic air pollution reproducer.