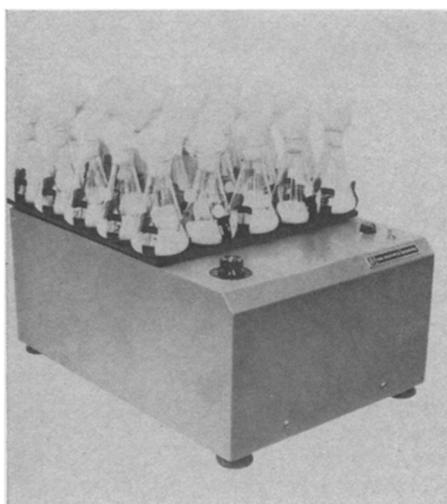


# new products

## Gyrotory shaker



In growing microorganisms for biological research, it is important that the test tube, beaker or flask containing the cells be mechanically agitated. The agitation allows more oxygen and nutrients to be mixed in, permitting optimum growth.

For a researcher who wants to study cell growth or the production of cell products, such as enzymes, antibiotics or toxins, it is important to have uniform agitation; otherwise differences between culture samples might be caused simply by differing amounts of nutrients and oxygen.

A heavy-duty, portable shaker that is controlled by a gyrotory drive mechanism to assure uniform agitation, is now available from New Brunswick Scientific Co. A platform for the beakers, flasks and test tubes containing the culture medium is placed on the shaker. The shaker's motion rotates the platform in an orbit so that each flask, beaker or test tube describes a circle three-fourths inch in diameter. The result is a uniform swirling motion of the contents and an even mixing of nutrients and oxygen in the culture medium.

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## Particle counter

Condensation nuclei are microscopic particles upon which atmospheric water vapor condenses. Instruments to measure them are large and bulky, and are difficult for the meteorologists to use in the field. A new condensation nuclei counter developed by General Electric, weighing only 3.5 pounds and measuring 3x5x7 inches is now available. It

can also measure air pollutants by the use of conversion techniques that change the particular pollutant into condensation nuclei.

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## Chromatography kits

Column chromatography is an analytical technique for determining the composition of substances by separating their constituents and then identifying them by chemical means. This method enables individual students on their own to perform water pollution analyses that they previously would have had to do with laboratory equipment. Two column chromatography kits—one for chemical analysis and one for biological—put out by Scott Scientific, Inc. contain all the reagents and apparatus for 10 teams, or groups, of students at a time.

In operation, the polluted water is passed through plastic columns containing specially charged resins, which effect the necessary separation by retaining either chemical pollutants, such as nitrates, or biological contaminants, such as bacteria. Once separated and cultured, the pollutants can be identified by colometric tests.

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## Portable recorder

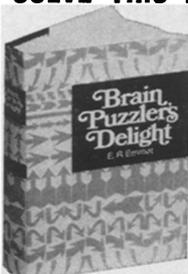
A problem for marine science researchers has been the difficulty of recording their measurements in the field. It has been common practice in oceanography, limnology and water pollution research to put a measuring device into the water and observe changes in dissolved oxygen content, conductivity, acidity and temperature as a function of depth. But once the measurements were made, plotting them in an open boat on a graph was a lengthy and cumbersome task.

A Martek Instruments battery-powered XY recorder—X and Y standing for the abscissa and ordinate on a graph—eliminates the difficulty by automatically plotting the measurements. In operation, a transducer converts the measured parameter into an electrical signal, which is transmitted via cable to the amplification module, where it undergoes further changes so that it may be permanently recorded on graph paper or read out on a meter.

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*Products are selected and listed as an editorial service geared to reader interest. The claims are the manufacturers', and further information on Products of the Week, should be secured from them.*

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The Driver beat Brown at billiards and Smith and the Guard often played golf with the men in black and green shirts. Jones and the Porter disliked the man in the green shirt, but this was not the Stoker as he always wore a red shirt.

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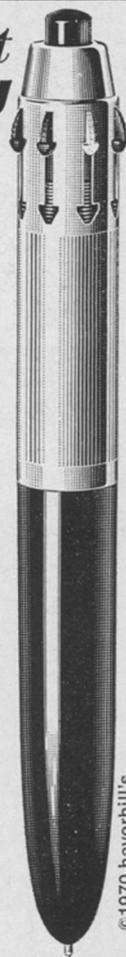
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