

September 1969

Brief 69-10351



# AEC-NASA TECH BRIEF



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## Foot-Operated Cell-Counter

### The problem:

Development of an efficient device for determining cell indices in autoradiographs and histological sections, and differential white-cell counts. During determinations of cell indices, routinely done by hand, both the fine adjustment and the state of the microscope are manipulated continually. Since one must remove his hand for operation of the typical laboratory counter, this process becomes tedious and inefficient.

### The solution:

A foot-operated cell-counter for cell indices, consisting of a footboard with four pressure-sensitive switches, and an enclosure for the components and circuitry (1). The device increases the operator's efficiency by reducing the number of hand movements required. The counter has worked satisfactorily and accelerated the tabulation of indices.

Operators had little difficulty in locating the correct pedals. In most counts, two classes of cells are frequent and the remaining classes are infrequent; therefore the amount of movement of the operator's foot is not excessive.

### How it's done:

The apparatus has a footboard with four pressure-sensitive switches, and an enclosure for the registers and circuitry. The electronics are completely solid state and consist of a separate board for each channel; the power supply is common to all channels.

Each switch position is designed to discharge a capacitor into a "one-shot" multivibrator; the appropriate register-driver and the register respond to this circuit. The cumulative register and a channel

register are driven simultaneously by a diode or gate.

An audible alarm is connected to the "normally open" contacts of the cumulative register whose pre-set feature allows the alarm to be set to any number up to 9,999.

### Reference:

1. Eisler, W. J., Jr.; Fry, R. J. M.; Le Buis, D.: *ANL-7409*, Argonne National Laboratory, 1967; A Foot-Operated Cell Counter, *Lab. Practice*, in press, p. 196.

### Notes:

1. This information may interest biological-research laboratories and blood-facility personnel.
2. Inquiries may be directed to:  
Office of Industrial Cooperation  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, Illinois 60439  
Reference: B69-10351

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### Patent status:

Inquiries concerning rights for commercial use of this innovation may be made to:

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Chicago Patent Group  
U.S. Atomic Energy Commission  
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Category 01