DESIGNATIONS FOR THE K ANTIGENS
OF *ESCHERICHIA COLI* SEROTYPES

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The K antigens of *Escherichia coli* serotypes compose a class of somatic antigens that is divisible into at least three varieties, L, A, and B, based upon differences in physical properties.* All known *E. coli* K antigens occur as envelopes, sheaths, or capsules and inhibit agglutination of living bacterial suspensions in O antisera. This inhibitory effect on O agglutination is inactivated by heat, either at 100°C or at 121°C, depending upon the variety of K antigen present in a particular serotype.

As presently constituted, the *E. coli* antigenic schema contains 77 delineated K antigens; 30 L, 26 A, and 21 B antigens. These 77 antigens are numbered consecutively from 1 to 77 with K antigen numbers. However, it has been the practice in the past to assign not only a K antigen number but also a separate B antigen number to each new B antigen as it was described. When the number of B antigens was small, this dual system of numbering was innocuous, but now that it is known that there are many B antigens in the *E. coli* group the dual system has become cumbersome and has led to confusion. Several alternative methods were suggested and after consideration of the advantages and disadvantages of each, the writers adopted the following principles and wish to propose them for use in the designation of *E. coli* K antigens in the future.

* For detailed discussions of the differences between the varieties of K antigens, the reader is referred to:

Edwards, P.R., and W.H. Ewing. *Identification of Enterobacteriaceae*. Burgess. Minneapolis. 1955.

Kauffmann, F. *Enterobacteriaceae*. 2nd Ed. Munksgaard. Copenhagen. 1954.

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1. To continue to assign consecutive K antigen numbers to newly described K antigens, whether they be of the L, A, or B variety.
2. To stop the assignment of separate B antigen numbers.
3. In writing the antigenic formula of an E. coli serotype, the variety of K antigen contained in the serotype should be indicated, e.g.,

01 : K1 (L) : H7
08 : K8 (A) : H4
018 : K76 (B) : H14

4. For the next few years the formulas of those serotypes that possess described and numbered B antigens may be written as follows:

026 : K60 (B6) : H11
055 : K59 (B5) : H6
0111 : K58 (B4) : H12

Later, when investigators become more accustomed to the K antigen numbers, the B antigen numbers should be dropped from the written formulas, e.g.,

026 : K60 (B) : H11
055 : K59 (B) : H6
0111 : K58 (B) : H12