SUMMARY

A simple densitometric method is described which is designed to measure variable chromosome bands. In this method chromosomes are scanned from positives which are produced from microphotographic negatives. For comparison of respective chromosome bands, indices are used. These indices are calculated as quotients from a constant band and a variable band on the same chromosome.

Such indices are calculated from measurements of chromosomes 3, 4, 13, 14, 15, 21, and 22. Only the chromosomes 3 and 4 yielded enough data for a larger analysis. In this analysis 10 individuals are included to test the intraindividual variability. In the main series 100 individuals are analysed.

For the index values of the chromosomes 3 and 4 an attempt is made for a classification in 4 different classes of brightness. Most values show a good conformity with comparable others but some do not. This indicates the influence of errors which might be considerable.

In general the distribution of the index values agrees with a normal distribution of the index values agrees with a normal distribution curve. No comparison of the data obtained in this study is possible with data from visual classification of polymorphic chromosome regions.
More sophisticated methods have to be developed in order to make it possible to compare population cytogenetic data from one lab to the other.
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