A versatile computer programme for the recalculation of rock and mineral analyses

THIS programme will accept any number of rock analyses (of any type, including carbonatites) or mineral analyses or a mixture of both, in up to 33 of the most commonly determined elements and oxides. The output, which is individually specified for each analysis, can be atomic ratios to any selected sum of O,OH,Cl, and F, or atomic or molecular percentages, with or without a C.I.P.W. norm and certain commonly used normative ratios. If errors occur in the data supplied, that analysis is omitted and the computer proceeds to the next. Mineral analyses involving oxides other than the 33 provided for can be handled by a simple manual preliminary calculation.

The programme is available in two versions: one, in basic Mercury Autocode, gives an output that, being without captions, must be read with a key; the other, in Extended Mercury Autocode, gives a fully annotated output convenient for storage, and may be arranged to give both atomic ratios to a selected basis and molecular percentages. Both programmes are available from any of the authors either on 5-hole tape or in typescript, and one or other should be adaptable to any computer competent to read Autocode. Execution time for n analyses is approximately $18(n+10)$ seconds on the Ferranti Mercury computer, and much less on Atlas.

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