6-Bromo-2-methylthio-3-phenyl-4-quinazolone. —To a solution of sodium hydroxide (5 g.) in 85 ml. of 50% aqueous ethanol, 6-bromo-2-thio-3-phenyl-4-quinazolone (8·5 g.) was added. The solution was then stirred, filtered and treated with methyliodide (4 ml.); after being stirred again for an hour, the solution gave a crystalline product which was washed first with water and then with ethanol. Long needles were obtained on crystallization from ethanol.

Similarly, various 6-bromo-S-substituted-2-thio-3-aryl (or alkyl)-4-quinazolones have been prepared. Their yields, melting points, and analytical data are recorded in Tables II to IV.

Thanks are due to the Council of Scientific and Industrial Research, New Delhi, for the award of a Junior Research Fellowship to one of us (R. L.).

Department of Chemistry, Banaras Hindu Univ., Varanasi, *July* 24, 1967.

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A DIFFERENTIATED DOLERITE DYKE FROM CHANDRAGIRI, CHITTOOR DT., ANDHRA PRADESH

THE differentiated dolerite dyke is noticed 1 km N.W. of Chandragiri. The dyke is 6 to 7 metres wide and can be traced along its strike for 1 km. It strikes E.W. and has intruded into coarse-grained granite. The chilled border is dark aphanitic enclosing microphenocrysts of zoned plagioclase and clino pyroxene. Within few centimeters from the border the rock rapidly grades into coarser type showing a typical basaltic texture. It is increasingly coarser towards the centre with subophitic to ophitic texture and acquires a little interstitial micropegmatite.

The three specimens collected, (1) a few centimeters away from the contact, (2) at the center, and (3) in between the two were chemically analysed. The chemical analyses together with calculated C.I.P.W. norm are given in Table I.

From Table I it is evident that there is a gradual increase in silica, alumina, titania and alkalies and decrease in magnesia and lime from

TABLE I

		KA1	KA2	KA3		C.I.P.W. norms KA1	KA2	KA3
SiO_2	..	50·28	52·02	55·96	Q	1·56	7·26	10·32
TiO_2	..	0·96	1·08	1·13	Or	3·34	5·00	7·23
Al_2O_3	..	13·39	14·78	16·60	Ab	8·91	9·96	22·01
Fe_2O_3	..	1·16	1·96	1·75	An	30·02	32·53	30·02
FeO	..	8·67	9·67	7·66	Di Wo	15·78	9·05	2·44
					Di En	9·20	4·50	1·20
MnO	..	0·24	0·24	0·24	Di Fs	5·81	4·36	1·19
MgO	..	8·76	6·18	4·34	Hy En	12·70	11·00	9·70
CaO	..	13·86	11·06	7·43	Hy Fs	7·79	10·30	10·08
Na_2O	..	1·08	1·23	2·62	Mt	1·86	3·02	2·55
K_2O	..	0·64	0·83	1·22	Il	1·82	2·13	2·13
P_2O_5	..	0·15	0·13	0·15	Ap	0·34	0·34	0·34
H_2O	..	0·81	0·82	1·02	H_2O	0·81	0·82	1·02
Total	..	99·98	100·00	100·12		99·94	100·27	100·18

KA1—Border part of the dyke, KA2—In between KA1 and KA3, KA3—Central part of the dyke.
Analyst: K. Anjanappa.

sample KA1 to KA3. Iron increases in the initial stage and decreases in the later stage.

The *normative minerals, viz.*, quartz, felspars and pyroxenes with iron ores, when plotted on Q.L.M. diagram, show that the magma composition steadily changes from basic to slightly acidic one (Fig. 1 Curve I) due to differentiation. The course of crystallization of dolerite is also evident in the alkali-total iron-magnesia diagram (Fig. 1 Curve II). The curve is concave downwards indicating iron enrichment with respect to magnesia in the initial stages and enrichment of alkalies in the later stages. The alkali enrichment during the course of crystalization is shown on lime-soda-potash diagram (Fig. 1. curve III).

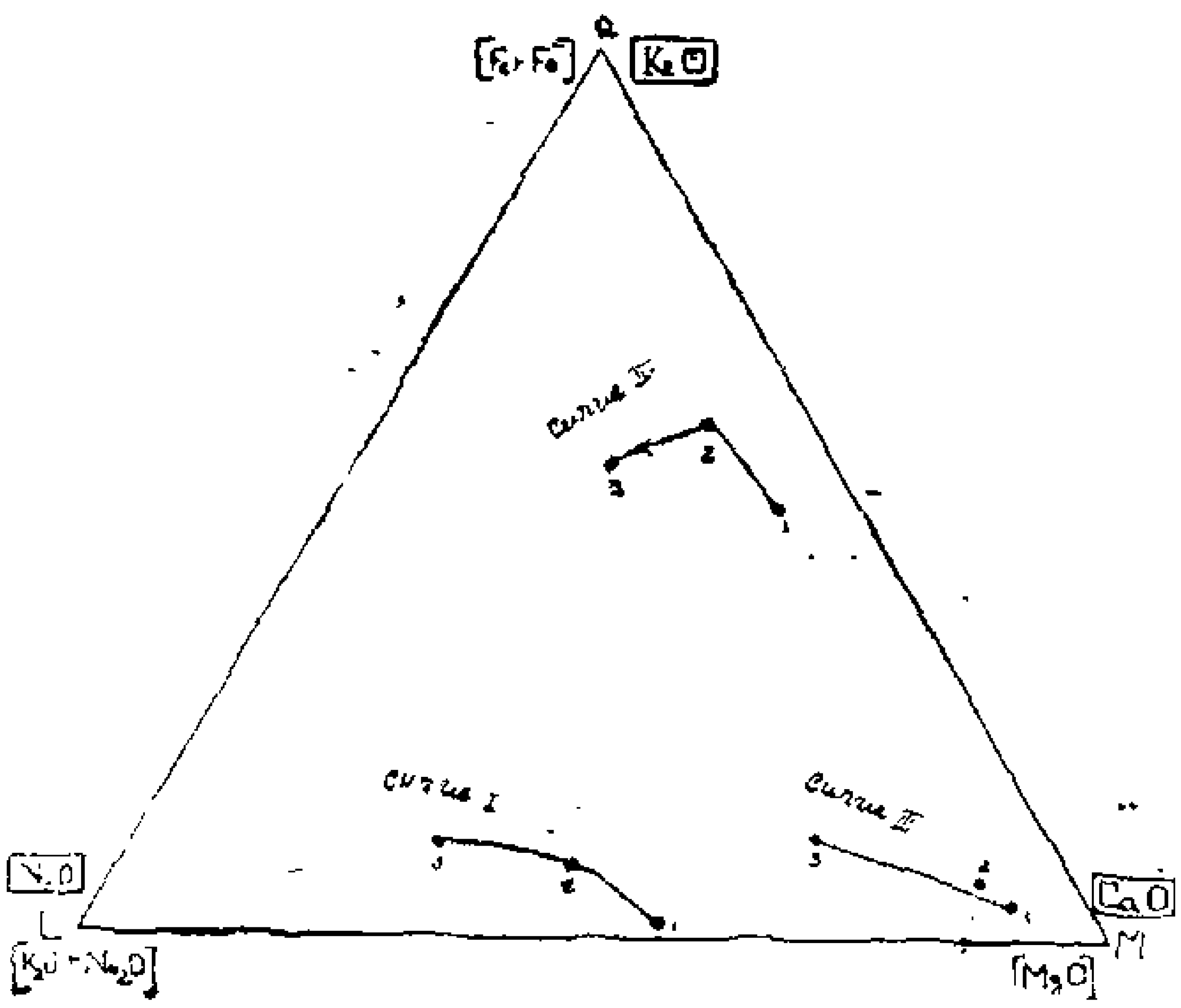

FIG. 1. Variation in the composition of the dyke during the course of crystallization. The numbers 1, 2 and 3 in the curves correspond to the analyses in the Table KA1, KA2 and KA3 respectively.

It will be evident from the above that, within a single intrusive mass, which is here in the form of a dyke, evidences of differentiation are clearly discernible. These observations are similar to those made by other authors on the differentiation of the dolerites (Walker and Poldervaart, 1949,[1] Mc Dougall, 1962,[2] 1964[3])

The author thanks Prof. M. G. Chakrapani Naidu for his helpful suggestions, and Dr. K. V. Suryanarayana for his guidance.

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ALKALI-POOR BIOTITES FROM THE VELENCE MTN. GRANITES, HUNGARY

THE author while working on the geology of the Velence Mtn. region, Hungary, studied the minerals occurring in the granites of that area, in greater details. Thus the biotites occurring in these granites were separated and were got analysed in the Chemical Laboratories of the Geological Survey of Hungary, Budapest. The results of the chemical analysis are given below:

SiO_2	33·24
TiO_2	3·02
Al_2O_3	15·60
Fe_2O_3	3·54
FeO	25·61
MnO	0·71
MgO	5·79
CaO	1·63
Na_2O	0·28
K_2O	3·84
$-H_2O$	0·40
$+H_2O$	5·86
P_2O_5	0·70
CO_2	0·00
	100·22

Analysts—Nemes Lajosné
Soha Istvánné

On comparison with the chemical analyses of *biotites from granites* as quoted in the literature,[1,5,6] it is found that the biotite in question is poor in alkalis, being extremely so in potash. In order to visualise this feature, the contents of the three oxides, *viz.*, SiO_2, K_2O and Na_2O (as obtained from the chemical analyses) were recalculated to 100. Based on these values, a triangular variation diagram was drawn (Fig. 1). This diagram clearly shows that the

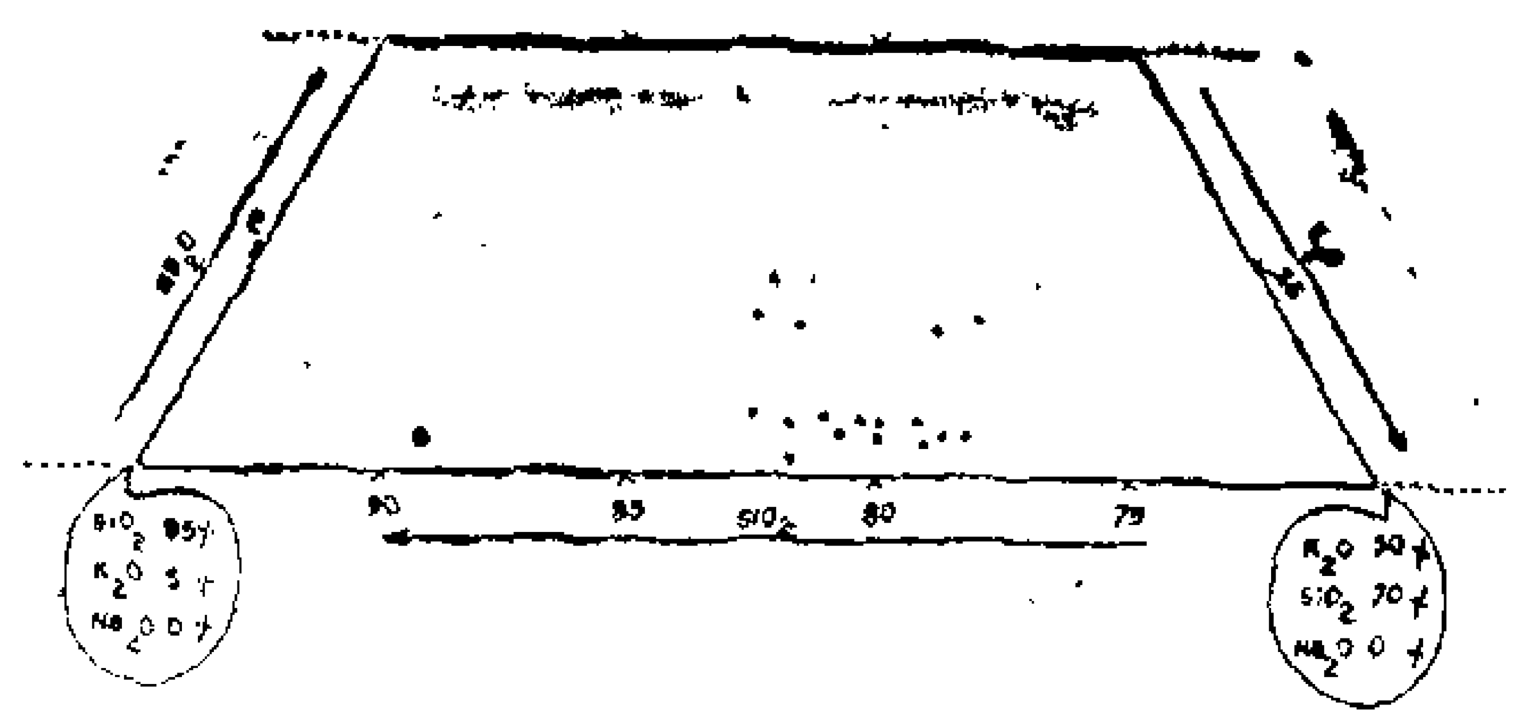

FIG. 1. SiO_2, K_2O & Na_2O variation diagram for the biotites from granites. (⊙ Biotite from granites of Velence mtn. region, Hungary).

alkali-content of the biotite in question is extremely low which in itself indicates that the biotite under study is unusual as the analysed biotite falls far away from the field of common