Li_2O tr.; H_2O + 110° 12·45; H_2O −110° 3·3; TiO_2 n.f.; P_2O_5 0·01; MnO n.f., CO_2 n.f.

Spectrographic analysis: Ag 0·015; Pb 0·015; Sn <0·01; Ba 0·05. Not detected: V, Cd, As, Be, Zn, W, Mo, Ni, Cr, Co, Bi, Sb, B, La, Yt, Ce. Total: 99·44. J. A. RITCHIE *anal.*, s. g. 2·23 ± 0·01.

Structural formula: $(Ca_{2\cdot9}Sr_{0\cdot5}Na_{1\cdot5}K_{0\cdot5})Al_{9\cdot2}Si_{26\cdot8}O_{72}.24\cdot8H_2O$ in satisfactory agreement with that of HEY and BANNISTER (1934) and Appendix C above.

Refractive indices variable, α 1·500–1·505 ± 0·001, β 1·500–1·506 ± 0·001, γ 1·506–1·512 ± 0·002.

Prehnite

Locality: Prospect Quarry, New South Wales. Large, transluscent, very pale green botryoidal masses in cavities in dolerite. Average of comparable analyses by A.M.T. and by J. A. RITCHIE, Dominion Laboratory, Wellington: SiO_2 43·7; Al_2O_3 24·05; Fe_2O_3 0·93; FeO 0·03; MgO 0·11; CaO 26·85; Na_2O 0·04; K_2O n.f.; Li_2O n.f.; H_2O + 110° 4·54; H_2O −110° 0·03; TiO_2 tr.; P_2O_5 0·02; MnO n.f.; CO_2 n.f.; Spectrographic analysis (Dominion Laboratory): Ag 0·01; Pb 0·04; SnO 0·01; BaO <0·003. Not detected: V, Cd, etc., as above. Total: 100·36; s. g. 2.93.

Formula on basis of eleven oxygen atoms:

$(Ca_{1\cdot98}Mg_{0\cdot01}Na_{0\cdot01})(Al_{1\cdot95}Fe_{0\cdot05})Si_{3\cdot01}O_{11}.1\cdot04H_2O$ in very close agreement with the conventional formula $Ca_2Al_2Si_3O_{10}(OH)_2$. α 1·615 ± 0·001; β 1·624 ± 0·001; γ 1·643 ± 0·002; $\gamma-\alpha$ 0·028; $2V_\gamma$ 69° ± 2° $r > v$ strong.

As is common in prehnite from such environments, and in contrast to the prehnite described in Section 2 above from the New Zealand greywackes, basal sections show complex lamellar twinning, and when thick, anomalous interference tints and incomplete extinction.

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