

part of the potash is replaced by soda it will be found that the point of fusion is still lower.

The spar should be as free as possible from iron-bearing or other dark-burning minerals. "Several dark-burning minerals—hornblende, tourmaline, and black mica—if not completely separated, show in the fired sample or finished ware as very fine black specks. These would hardly be noticed by the uninitiated, but contribute a gray cast to the ware."<sup>1</sup> Though quartz is added to the feldspar in the various mixtures, some users specify against free silica in excess of 5 per cent. They prefer to add the quartz themselves, thus obviating the danger of irregular results arising through the fluctuation of silica contents of the high-silica spar.

Feldspar, usually No. 2 grade, is used in enameling brick and metal. The spar is one of the fluxing materials which goes to form the porcelain-like coating of the ware. For this purpose, also, the spar should be as free as possible from the dark-burning minerals.

In the making of artificial teeth only the highest grade of feldspar, containing no dark-burning minerals whatever, is used.

In the manufacturing of abrasive wheels feldspar is one of the bonding materials used. On firing the wheels, the feldspar fuses and firmly cements the grains of emery, corundum or carborundum together. For this purpose No. 3 grade is employed, and, since the colour is not of importance, small quantities of foreign minerals are not objected to.

The addition of alumina to the mixture for glassmaking causes opalescence. Since feldspar contains alumina in a readily fusible form it is used in manufacturing opal glass. White mica in very small quantities, and free silica are permissible, but the spar should be as free as possible from iron-bearing or other minerals which would tend to colour the finished product.

Very finely ground feldspar is used in preparing certain scouring soaps and polishes.

<sup>1</sup> Page 436, Transactions American Ceramic Society, Vol. XII. "The requirements of Pottery Materials," by Harrison Everett Ashley.