Brongniart's Formula.

Quote from "Handbook for Australian Potters":(Harrison et al)

"This is a simple mathematical formula developed by A.Brongniart and first published in *Traite des Arts Ceramiques,* volume 1, 1854, p249. Brongniart's formula is used to determine how much dry material is suspended in a clay or glaze slip, so that weighed additions can be added as a percentage"

The formula is:

$$W = G(L-1000)/(G-1)$$

Where

W = Weight of dry material in 1 litre of slip
L = Weight of 1 litre of the slip, in grams
G = Relative density of the material in the slip.

. Typical relative density figures, from textbook:

Material	Relative Density
Feldspar	2.6
Nepheline syenite	2.5 to 2.6
Silica	2.65
Whiting	2.7 to 2.9
Talc	2.7 to 2.8
Dolomite	2.8 to 2.9
Various kinds of clays	2.5 or 2.6

The formula is a messy thing to calculate. But since the materials used in glazes have similar relative density figures , it's possible to reduce all this to a simple look-up table. Assuming an average relative density figure of 2.6, here's the table:

Relative Density of Glaze	Dry Matter in 1 Litre (grams)	Volume containing 100 grams of solids (mL)
1.05	81	1231
1.1	162	615
1.15	244	410
1.2	325	308
1.25	406	246
1.3	487	205
1.35	569	176
1.4	650	154
1.45	731	137
1.5	812	123
1.55	894	112
1.6	975	103
1.65	1056	95
1.7	1137	88