

# Conversion Factors

For determination of the principal constituents, or equivalents, of more common boron compounds, the following table of conversion factors may be found convenient.

As an example of its application:

1. Wanted: pounds of  $B_2O_3$  in X pounds of borax

Calculation: X pounds of borax x 0.3652 = pounds of  $B_2O_3$

2. Wanted: pounds of borax equivalent to x pounds of  $B_2O_3$

Calculation: pounds of  $B_2O_3$  x 2.738 = pounds of borax to furnish x pounds of  $B_2O_3$

For Pure Boron Compounds				
To convert		to	Multiply by	Reciprocal
BORIC OXIDE (Boric Trioxide or Anhydrous Boric Acid)	$B_2O_3$	B	.31074	3.218
BORAX	$Na_2B_4O_7 \cdot 10H_2O$	$B_2O_3$	.3652	2.738
		$H_3BO_3$	.6485	1.542
		$Na_2B_4O_7$	.5277	1.895
		$Na_2B_4O_7 \cdot 5H_2O$	.764	1.309
		$Na_2O$	.1625	6.153
NEOBOR® (Borax 5 Mol) (Borax Pentahydrate)	$Na_2B_4O_7 \cdot 5H_2O$	$B_2O_3$	.4780	2.092
		$Na_2B_4O_7$	.6908	1.448
		$Na_2B_4O_7 \cdot 10H_2O$	1.309	.764
		$Na_2O$	.2128	4.700
BORIC ACID	$H_3BO_3$	$B_2O_3$	.5630	1.776
SODIUM METABORATE 8 MOL	$Na_2B_2O_4 \cdot 8H_2O$	$B_2O_3$	.2525	3.960
		$Na_2O$	.2248	4.448
SODIUM METABORATE 4 MOL	$Na_2B_2O_4 \cdot 4H_2O$		0.3419	2.924
			0.3043	3.286
SODIUM PERBORATE	$NaBO_3 \cdot 4H_2O$	$B_2O_3$	.2263	4.419
		0 (available)	.2014	4.965
			.1040	9.617
POTASSIUM TETRABORATE	$K_2B_4O_7 \cdot 4H_2O$	$B_2O_3$	.4559	2.193
		$K_2O$	.3083	3.244
POTASSIUM PENTABORATE	$K_2B_{10}O_{16} \cdot 8H_2O$	$B_2O_3$	.5937	1.685
		$K_2O$	.1606	6.221
AMMONIUM BIBORATE	$(NH_4)_2B_4O_7 \cdot 4H_2O$	$B_2O_3$	.5288	1.891
		$(NH_4)_2O$	.1977	5.058
		$NH_3$	.1293	7.734
AMMONIUM PENTABORATE	$(NH_4)_2B_{10}O_{16} \cdot 8H_2O$	$B_2O_3$	.6396	1.563
		$(NH_4)_2O$	.0957	10.450
		$NH_3$	.0626	15.974