



Coefficient of Expansion...

A quality metric
for autosampler vials:



Coefficient of thermal expansion (COE) measures the fractional change in size per degree change in temperature at a constant pressure.

Boric oxide is common to all silicate glass. Borosilicate glass must contain at least 5 % boric oxide. Boric oxide helps make the glass more tolerant of higher temperatures and corrosion.

All QEC Qromix™ vials are made from Type 1 borosilicate glass.

There are several COEs including linear, effects of strain, area, and volume. In vial glass, linear COE is the standard metric.

Type 1 clear borosilicate vial glass has a **linear COE of 33 or 51**.

Type 1 amber borosilicate vial glass has a **linear COE of 51**.

Some budget vial glass (non-silicate or with low boric oxide content, including a number of imported products) has a linear COE of 70-plus.

Type 1 glass also provides the best overall performance inclusive of lower pH shifts, temperatures above 100°C, and greater resistance to a range of matrices containing water, acids, and most organic substances.

For more information on how QEC quality works to protect your sample integrity, please contact your QEC representative, or our **customer service team** (800-255-3950).



Protecting your sample integrity™... Every container... Every time.