

**04.2, 04.1, and 10/92 SOW (Volatiles),
QA Mixes cont'd****L/C VOA Lab Control Sample #2**

vinyl chloride
2,500µg/mL in P&T methanol, 1mL/ampul
cat. # 30093 (ea.)

L/C VOA Internal Standard Mix

chlorobenzene-d5 1,4-difluorobenzene
1,4-dichlorobenzene-d4
2,500µg/mL each in P&T methanol, 1mL/ampul
cat. # 30091 (ea.)

**04.2 and 04.1 (Volatiles),
Calibration Mixes****CLP 04.1 VOA CAL2000 MegaMix®**

(40 components)

benzene	<i>cis</i> -1,3-dichloropropene
bromodichloromethane	<i>trans</i> -1,3-dichloropropene
bromoform	ethylbenzene
carbon disulfide	isopropylbenzene
carbon tetrachloride	methyl acetate
chlorobenzene	methyl <i>tert</i> -butyl ether (MTBE)
chloroform	methylcyclohexane
cyclohexane	methylene chloride
dibromochloromethane	styrene
1,2-dibromo-3-chloropropane (DBCP)	1,1,2,2-tetrachloroethane
1,2-dibromoethane	tetrachloroethene
1,2-dichlorobenzene	toluene
1,3-dichlorobenzene	1,2,4-trichlorobenzene
1,4-dichlorobenzene	1,1,1-trichloroethane
1,1-dichloroethane	1,1,2-trichloroethane
1,2-dichloroethane	trichloroethene
1,1-dichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113)
<i>cis</i> -1,2-dichloroethene	<i>m</i> -xylene
<i>trans</i> -1,2-dichloroethene	<i>o</i> -xylene
1,2-dichloropropane	<i>p</i> -xylene

2,000µg/mL each in P&T methanol, 1mL/ampul
cat. # 30456 (ea.)

502.2 Calibration Mix #1 (gases)

bromomethane	trichlorofluoromethane (CFC-11)
chloroethane	vinyl chloride
chloromethane	
dichlorodifluoromethane (CFC-12)	

200µg/mL each in P&T methanol, 1mL/ampul
cat. # 30439 (ea.)

2,000µg/mL each in P&T methanol, 1mL/ampul
cat. # 30042 (ea.)

VOA Calibration Mix #1 (ketones)

acetone	2-hexanone
2-butanone (MEK)	4-methyl-2-pentanone (MIBK)

5,000µg/mL each in P&T methanol:water (90:10), 1mL/ampul
cat. # 30006 (ea.)

3/90 SOW (Volatiles), Calibration Mixes**CLP VOA CAL2000 MegaMix®** (28 components)

benzene	<i>cis</i> -1,3-dichloropropene
bromodichloromethane	<i>trans</i> -1,3-dichloropropene
bromoform	ethylbenzene
carbon disulfide	methylene chloride
carbon tetrachloride	styrene
chlorobenzene	1,1,2,2-tetrachloroethane
chloroform	tetrachloroethene
dibromochloromethane	toluene
1,1-dichloroethane	1,1,1-trichloroethane
1,2-dichloroethane	1,1,2-trichloroethane
1,1-dichloroethene	trichloroethene
<i>cis</i> -1,2-dichloroethene	<i>m</i> -xylene
<i>trans</i> -1,2-dichloroethene	<i>o</i> -xylene
1,2-dichloropropane	<i>p</i> -xylene

2,000µg/mL each in P&T methanol, 1mL/ampul
cat. # 30632 (ea.)

Vinyl Acetate

2,000µg/mL in P&T methanol, 1mL/ampul
cat. # 30216 (ea.)

CLP VOA CAL2000 MegaMix® Kit

30632: CLP VOA CAL2000 MegaMix®
30216: vinyl acetate

kit

Contains 1mL each of these mixtures.

cat. # 30438 (kit)

VOA Calibration Mix #2 (7 components)

benzene	vinyl acetate
carbon disulfide	<i>o</i> -xylene
ethylbenzene	<i>p</i> -xylene
toluene	

2,000µg/mL each in P&T methanol, 1mL/ampul
cat. # 30007 (ea.)

VOA Calibration Mix #3 (10 components)

carbon tetrachloride	1,2-dichloropropane
chlorobenzene	methylene chloride
chloroform	1,1,2-trichloroethane
1,1-dichloroethane	trichloroethene
1,1-dichloroethene	<i>m</i> -xylene

2,000µg/mL each in P&T methanol, 1mL/ampul
cat. # 30008 (ea.)

VOA Calibration Mix #4 (12 components)

bromodichloromethane	<i>cis</i> -1,3-dichloropropene
bromoform	<i>trans</i> -1,3-dichloropropene
dibromochloromethane	styrene
1,2-dichloroethane	1,1,2,2-tetrachloroethane
<i>cis</i> -1,2-dichloroethene	tetrachloroethene
<i>trans</i> -1,2-dichloroethene	1,1,1-trichloroethane

2,000µg/mL each in P&T methanol, 1mL/ampul
cat. # 30009 (ea.)

VOA Calibration Mix #5 (gases)

bromomethane	chloromethane
chloroethane	vinyl chloride

2,000µg/mL each in P&T methanol, 1mL/ampul
cat. # 30010 (ea.)

**frequently
asked question****Why don't MegaMix® mixtures
contain ketones required by
the methods?**

In methanol solution, ketones can interact with other compounds, resulting in a methoxy addition to the ketone.¹ The presence of halogenated compounds greatly speeds the reaction, limiting shelf-life to less than two months. Because none of eighteen preservatives (including water) was successful at inhibiting the reaction, we do not combine ketones with halogenated compounds in any of our calibration mixtures.

Reference

¹A comparison of ketone stability in calibration mixes for EPA Method 524.2 Revision 4.0, Christopher Cox, et. al., 1997 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, poster number 467P.

**Antifoam Agent for
Purge & Trap Samples**

Foam generated as purge gas passes through a sample can enter the analytical trap, and possibly into the GC column. Our silica-containing antifoam agent is effective over a wide pH range, and will not conflict with chromatography of target analytes.

Neat, 1mL/ampul

cat. # 31822 (ea.)

No data pack available.