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Weathered Petrochemical Standards

These solutions are prepared from a single source (one refinery) product. The weathered materials indicate the percent weight loss from the original material. Samples of regular and premium grade unleaded gasoline were blended in equal volumes.

There are four general types of mineral spirits, classified according to boiling point range (BPR):

- Type I (Stoddard solvent) BPR 149–182°C
- Type II (high flash point) BPR 177–196°C
- Type III (odorless) BPR 149–196°C
- Type IV (low dry point) BPR 149–174°C

Stoddard Solvent Standard

10,000µg/mL in P&T methanol, 1mL/ampul
cat. # 30487 (ea.)

We prepare our mineral spirits solutions from an equal volume blend of Type I, II, and III mineral spirits.

Compound	cat.# (ea.)
5,000µg/mL in P&T methanol, 1mL/ampul	
unleaded gasoline: 25% weathered	30097
unleaded gasoline: 50% weathered	30098
unleaded gasoline: 75% weathered	30099
unleaded gasoline: 99% weathered	30436
unleaded gasoline: unweathered	30096
5,000µg/mL in methylene chloride, 1mL/ampul	
kerosene: 25% weathered	31230
kerosene: 50% weathered	31231
kerosene: 75% weathered	31232
kerosene: unweathered	31229
5,000µg/mL in methylene chloride, 1mL/ampul	
diesel fuel #2: 25% weathered	31234
diesel fuel #2: 50% weathered	31235
diesel fuel #2: 75% weathered	31236
diesel fuel #2: unweathered	31233
5,000µg/mL in methylene chloride, 1mL/ampul	
mineral spirits: 25% weathered	31226
mineral spirits: 50% weathered	31227
mineral spirits: 75% weathered	31228
mineral spirits: unweathered	31225
50,000µg/mL in methylene chloride, 1mL/ampul unless otherwise noted	
mineral spirits: unweathered	31260
mineral spirits: unweathered (5mL)	31261

Weathered Petrochemical Standards

cont'd

Weathered Gasoline Kit

30096: Unleaded Gasoline Standard
30097: Unleaded Gas Standard: 25% Weathered
30098: Unleaded Gas Standard: 50% Weathered
30099: Unleaded Gas Standard: 75% Weathered

kit

Contains 1mL each of these mixtures.

cat. # 30100 (kit)

Weathered Gasoline Kit #2

30096: Unleaded Gasoline Standard
30097: Unleaded Gas Standard: 25% Weathered
30098: Unleaded Gas Standard: 50% Weathered
30099: Unleaded Gas Standard: 75% Weathered
30436: Unleaded Gas Standard: 99% Weathered

kit

Contains 1mL each of these mixtures.

cat. # 30437 (kit)

Weathered Kerosene Kit

31229: Kerosene Standard
31230: Kerosene Standard: 25% Weathered
31231: Kerosene Standard: 50% Weathered
31232: Kerosene Standard: 75% Weathered

kit

Contains 1mL each of these mixtures.

cat. # 31238 (kit)

Weathered Diesel Fuel #2 Kit

31233: Diesel Fuel #2 Standard
31234: Diesel Fuel #2 Standard: 25% Weathered
31235: Diesel Fuel #2 Standard: 50% Weathered
31236: Diesel Fuel #2 Standard: 75% Weathered

kit

Contains 1mL each of these mixtures.

cat. # 31239 (kit)

Weathered Mineral Spirits Kit

31225: Mineral Spirits Standard
31226: Mineral Spirits Standard: 25% Weathered
31227: Mineral Spirits Standard: 50% Weathered
31228: Mineral Spirits Standard: 75% Weathered

kit

Contains 1mL each of these mixtures.

cat. # 31237 (kit)

please note

We can custom prepare weathered accelerants for fire debris analysis.

Please complete the custom reference material request form on [page 427](#).

We'll be glad to work with you!

Blood Alcohol Standards

We have developed calibration mixtures for performing multi-point instrument calibrations so that laboratories can construct calibration curves. The data pack (which can be downloaded from our website at www.restek.com/datapacks) includes a Certificate of Analysis, raw material testing results, statistical QA results, analytical balance printout, and gravimetric weight of each analyte. Ethanol in these mixes is National Institute of Standards and Technology (NIST)-traceable.

Compound	qty.	cat.#
0.010g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36276
1mL/ampul	10-pk.	36278
5mL/ampul	ea.	36277
0.015g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36232
1mL/ampul	10-pk.	36332
20mL/ampul	ea.	36248
0.02g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36233
1mL/ampul	10-pk.	36333
20mL/ampul	ea.	36249
0.025g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36234
1mL/ampul	10-pk.	36334
5mL/ampul	ea.	36242
0.04g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36235
1mL/ampul	10-pk.	36335
5mL/ampul	ea.	36243
20mL/ampul	ea.	36251
0.05g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36257
1mL/ampul	10-pk.	36259
5mL/ampul	ea.	36258
20mL/ampul	ea.	36260
0.08g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36262
1mL/ampul	10-pk.	36264
5mL/ampul	ea.	36263
20mL/ampul	ea.	36265
0.1g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36236
1mL/ampul	10-pk.	36336
5mL/ampul	ea.	36244
20mL/ampul	ea.	36252
0.15g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36237
1mL/ampul	10-pk.	36337
5mL/ampul	ea.	36245
20mL/ampul	ea.	36253
0.2g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36238
1mL/ampul	10-pk.	36338
5mL/ampul	ea.	36246
20mL/ampul	ea.	36254
0.3g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36239
1mL/ampul	10-pk.	36339
5mL/ampul	ea.	36247
20mL/ampul	ea.	36255
0.4g/dL forensic ethanol solution		
1mL/ampul	5-pk.	36266
1mL/ampul	10-pk.	36268
5mL/ampul	ea.	36267
20mL/ampul	ea.	36269

Blood Alcohol Standards cont'd

Blood Alcohol Mix Resolution Control Standard

(8 components)

Use to verify the retention time for each compound normally included in a blood alcohol test, and to verify that the compounds are resolved from and do not interfere with one another. Concentration of ethanol is NIST-traceable.

acetaldehyde	ethyl acetate
acetone	isopropanol
acetonitrile	methanol
ethanol (NIST certified value)	methyl ethyl ketone

0.100g/dL each in water, 1mL/ampul
cat. # 36256 (ea.)

Bank Dye Standard (MAAQ)

Restek offers this qualitative standard to help investigators in municipal police stations and criminal laboratories fight crime.

1-N-(methylamino)anthraquinone (MAAQ)

100µg/mL in methylene chloride, 1mL/ampul
cat. # 31823 (ea.)

No data pack available.

Explosives Solutions

Single-Component Explosives Solutions

These materials support nitroaromatic, nitramine, and nitroester analyses by GC-ECD (Method 8095).^{1,2} Compounds listed are explosives, manufacturing intermediates or degradation products. Method 8095 mixtures contain the components at concentration ratios appropriate for ECD.

Volume is 1mL/ampul. Concentration is µg/mL.

Compound	Solvent	µg/mL	cat.# (ea.)
2-amino-4,6-dinitrotoluene	ACN	1,000	31670
4-amino-2,6-dinitrotoluene	ACN	1,000	31671
ammonium picrate	ACN	2,000	31890
3,5-dinitroaniline	ACN	1,000	31661
1,3-dinitrobenzene	ACN	1,000	31662
1,4-dinitrobenzene	ACN	2,000	33205
2,4-dinitrotoluene	ACN	1,000	31663
2,6-dinitrotoluene	ACN	1,000	31664
EGDN	M	1,000	31601
HMX	ACN	1,000	31665
nitrobenzene	ACN	1,000	31657
nitroglycerin	M	1,000	31498
nitroguanidine	M	1,000	31602
2-nitrotoluene	ACN	1,000	31659
3-nitrotoluene	ACN	1,000	31660
4-nitrotoluene	ACN	1,000	31658
PETN (pentaerythritol tetranitrate)	M	1,000	31600
picric acid	M	1,000	31499
propylene glycol dinitrate (PGDN)	M	1,000	31821
RDX	ACN	1,000	31666
tetryl	ACN	1,000	31667
1,3,5-trinitrobenzene	ACN	1,000	31668
2,4,6-trinitrotoluene	ACN	1,000	31669

ACN = acetonitrile

M = methanol

did you know?

Our Rtx®-BAC1 and Rtx®-BAC2 columns can resolve a blood alcohol sample in less than 3 minutes. We continually improve analytical methods and develop innovative products for clinical/forensic applications. If you have any questions about methods or products, please contact our Technical Service Team at: support@restek.com or contact your Restek representative.

also available

Explosives Analysis

For other reference mixes for analyses of nitroaromatic and nitramine explosives residues, refer to [pages 461 and 471](#).

References (Not available from Restek.)

¹US Environmental Protection Agency. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*. SW-846, Proposed Draft Update IVB, Office of Solid Waste, Washington, DC, 1999.

²M. E. Walsh, T. Ranney, J. *Chromatogr. Sci.*, Vol. 36, pp. 406-416, August 1998.

Exempted Drug of Abuse Reference Materials

Concentration is µg/mL. Volume is 1mL/ampul.

free data

Available on Our Website: Lot Certificates, Data Packs, and MSDSs

For complete information detailing manufacturing and testing for Restek inventoried reference standards, visit our website at www.restek.com.

To view lot certificates and/or an MSDS, enter the catalog number of the product in the Search feature. For a free data pack (Adobe® PDF file), enter the catalog number and lot number of the product.

Compound	CAS#	Solvent Code	Conc.	cat.# (ea.)
Benzodiazepines				
alprazolam	28981-97-7	PTM	1,000	34042
bromazepam	1812-30-2	PTM	1,000	34043
chlordiazepoxide	438-41-5	PTM	1,000	34044
clobazam	22316-47-8	PTM	1,000	34045
clonazepam	1622-61-3	PTM	1,000	34046
diazepam	439-14-5	PTM	1,000	34047
flunitrazepam	1622-62-4	PTM	1,000	34049
flurazepam	1172-18-5	PTM	1,000	34050
lorazepam	846-49-1	PTM	1,000	34051
nitrazepam	146-22-5	PTM	1,000	34053
prazepam	604-75-1	PTM	1,000	34054
oxazepam	2955-38-6	PTM	1,000	34055
temazepam	896-50-4	PTM	1,000	34056
triazolam	28911-01-5	PTM	1,000	34057
Cocaine & Metabolites				
cocaethylene	529-38-4	ACN	1,000	34066
cocaine	53-21-4	PTM	1,000	34015
benzoylecgonine	519-09-5	PTM	1,000	34016
ecgonine	5796-31-6	PTM	1,000	34017
ecgonine methyl ester	38969-40-3	PTM	1,000	34018
Methadone & Metabolites				
EDDP				
perchlorate	66729-78-0	M	1,000	34069
methadone	1095-90-5	PTM	1,000	34005
Amphetamines & Metabolites				
d-amphetamine	51-63-8	PTM	1,000	34020
(+)-methamphetamine	51-57-0	PTM	1,000	34021
3,4-MDA HCl	4764-17-4	M	1,000	34070
3,4-MDEA HCl	82801-81-8	M	1,000	34072
3,4-MDMA HCl	42542-10-9	M	1,000	34071
phenylpropanolamine HCl	154-41-6	M	1,000	34073
Opiates & Metabolites				
codeine	76-57-3	PTM	1,000	34000
dextromethorphan HBr				
monohydrate	125-69-9	M	1,000	34081
hydrocodone	34195-34-1	PTM	1,000	34002
hydromorphone	71-68-1	PTM	1,000	34063
morphine	6211-15-0	PTM	1,000	34006
oxycodone	124-90-3	PTM	1,000	34007
oxymorphone	76-41-5	PTM	1,000	34065
Cannabinoid & Metabolites				
cannabidiol	13956-24-1	PTM	1,000	34011
cannabinol	521-35-7	PTM	1,000	34010
Δ ⁹ -THC	1972-08-3	M	1,000	34067
(±)11-nor-9-carboxy-Δ ⁹ -THC	104874-50-2	M	100	34068
Barbiturates				
amobarbital	64-43-7	PTM	1,000	34028
aprobarbital	77-02-1	PTM	1,000	34029
barbital	57-44-3	PTM	1,000	34030
butobarbital	125-40-6	PTM	1,000	34031
butalbital	77-26-9	PTM	1,000	34032
DL-glutethimide	18389-24-7	PTM	1,000	34058
hexobarbital	56-29-1	PTM	1,000	34033
mephobarbital	115-38-8	PTM	1,000	34034
methohexital	151-83-7	PTM	1,000	34035
pentobarbital	76-74-4	PTM	1,000	34036
phenobarbital	50-06-6	PTM	1,000	34037
secobarbital	29071-21-4	PTM	1,000	34038
talbutal	115-44-6	PTM	1,000	34039
thiamylal	337-47-3	PTM	1,000	34040
thiopental	71-73-8	PTM	1,000	34041

Compound	CAS#	Solvent Code	Conc.	cat.# (ea.)
GHB				
1,4-butanediol	110-63-4	M	1,000	34078
γ-butyrolactone (GBL)	96-48-0	ACN	1,000	34077
γ-hydroxybutyrate (GHB)	502-85-2	M	1,000	34076
α-methylene-γ-butyrolactone (AMGBL)	547-65-9	ACN	1,000	34079
γ-valerolactone	108-29-2	ACN	1,000	34080
LSD				
LAMPA	40158-98-3	ACN	1,000	34075
LSD	50-37-3	ACN	25	34089
LSD	50-37-3	ACN	100	34088
Other				
benzphetamine	5411-22-3	PTM	1,000	34022
caffeine	58-08-2	M	1,000	34084
continine	486-56-6	M	1,000	34086
fenfluramine	16105-77-4	PTM	1,000	34023
fentanyl	437-38-7	M	1,000	34082
nor-fentanyl				
oxalate	1609-66-1	M	1,000	34083
levorphanol	5985-38-6	PTM	1,000	34003
mepredine	50-13-5	PTM	1,000	34004
meprobamate	57-53-4	PTM	1,000	34059
methaqualone	340-56-7	PTM	1,000	34064
methyprylon	125-64-4	PTM	1,000	34060
nicotine	54-11-5	M	1,000	34085
pentazocine	64024-15-3	PTM	1,000	34062
phencyclidine	956-90-1	PTM	1,000	34027
phendimetrazine	50-58-8	PTM	1,000	34025
phenmetrazine	1707-14-8	PTM	1,000	34026
phentermine	1197-21-3	PTM	1,000	34024
dextro-propoxyphene				
1639-60-7	PTM	1,000	34008	
thebaine	115-37-7	PTM	1,000	34009

ACN = acetonitrile

M = methanol

PTM = purge & trap grade methanol



custom standards

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