

## Clinical/Forensic Fast Facts

# Blood Alcohol Testing

## Ethanol Analytical Reference Materials

- NIST-traceable ethanol calibration standards from 0.010g/dL to 0.4g/dL in water.
- Eight-component resolution control standard with NIST-certified ethanol concentration.
- Certificate of Analysis provided with each standard.

Legal limits for blood alcohol in the United States are set at either 0.080g/dL or 0.100g/dL. We offer high- and low-concentration standards so that laboratories can construct calibration curves that bracket either limit. In addition, we offer 0.015g/dL and 0.025g/dL concentrations, which are important in “zero-tolerance” cases involving minors or convicted DUI offenders.

These standards are National Institute of Standards and Technology (NIST)-traceable and are shipped with a Certificate of Analysis. A complete data pack is available on-line ([www.restek.com/datapacks](http://www.restek.com/datapacks)) that includes copies of all raw material testing results, statistical QA results, analytical balance printout, and a lot sheet showing the gravimetric weight of each analyte.

Use our Resolution Control Standard mix to verify the retention time for each compound normally detected in a blood alcohol test, and to verify that the compounds are resolved from and do not interfere with each other. Each compound in this resolution mix is 0.100g/dL. The ethanol concentration is an NIST-traceable certified value.

We also offer Rtx®-BAC1 and Rtx®-BAC2 columns, which can resolve a blood alcohol sample in less than 3 minutes. If you have any questions about blood alcohol methods, or these products, please contact our Technical Service Team at [support@restek.com](mailto:support@restek.com) or via phone at 800-356-1688 or 814-353-1300, ext. 4.

### Blood Alcohol Standards

Compound	qty.	cat.#
<b>0.010g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36276
1mL/ampul	10-pk.	36278
5mL/ampul	ea.	36277
<b>0.015g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36232
1mL/ampul	10-pk.	36332
5mL/ampul	ea.	36240
20mL/ampul	ea.	36248
<b>0.02g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36233
1mL/ampul	10-pk.	36333
5mL/ampul	ea.	36241
20mL/ampul	ea.	36249
<b>0.025g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36234
1mL/ampul	10-pk.	36334
5mL/ampul	ea.	36242
20mL/ampul	ea.	36250
<b>0.04g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36235
1mL/ampul	10-pk.	36335
5mL/ampul	ea.	36243
20mL/ampul	ea.	36251
<b>0.05g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36257
1mL/ampul	10-pk.	36259
5mL/ampul	ea.	36258
20mL/ampul	ea.	36260
<b>0.08g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36262
1mL/ampul	10-pk.	36264
5mL/ampul	ea.	36263
20mL/ampul	ea.	36265
<b>0.1g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36236
1mL/ampul	10-pk.	36336
5mL/ampul	ea.	36244
20mL/ampul	ea.	36252

Compound	qty.	cat.#
<b>0.15g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36237
1mL/ampul	10-pk.	36337
5mL/ampul	ea.	36245
20mL/ampul	ea.	36253
<b>0.2g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36238
1mL/ampul	10-pk.	36338
5mL/ampul	ea.	36246
20mL/ampul	ea.	36254
<b>0.3g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36239
1mL/ampul	10-pk.	36339
5mL/ampul	ea.	36247
20mL/ampul	ea.	36255
<b>0.4g/dL forensic ethanol solution</b>		
1mL/ampul	5-pk.	36266
1mL/ampul	10-pk.	36268
5mL/ampul	ea.	36267
20mL/ampul	ea.	36269

### 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	



## GC Columns

### Rtx®-BAC1 Columns (fused silica)

ID	df (µm)	temp. limits	length	cat. #
0.32mm	1.80	-20 to 240/260°C	30-Meter	18003
0.53mm	3.00	-20 to 240/260°C	30-Meter	18001

### Rtx®-BAC2 Columns (fused silica)

ID	df (µm)	temp. limits	length	cat. #
0.32mm	1.20	-20 to 240/260°C	30-Meter	18002
0.53mm	2.00	-20 to 240/260°C	30-Meter	18000

### MXT®-BAC1 Column (Silcosteel® treated stainless steel)

ID	df (µm)	temp. limits	length	cat. #
0.53mm	3.00	-20 to 240°C	30-Meter	78001

### MXT®-BAC2 Column (Silcosteel® treated stainless steel)

ID	df (µm)	temp. limits	length	cat. #
0.53mm	2.00	-20 to 240°C	30-Meter	78000

## custom standards

Restek is your #1 source for custom analytical reference materials!

- Made to your exact specifications.
- Quotations supplied free of charge.
- Most orders shipped within 5–10 working days.

Call our reference materials department, use this form, or contact your Restek representative for more information.



## Custom Reference Materials Form

### Take these **eight** steps to create the right solution:

1. Mixture Description: \_\_\_\_\_
2. Solvent: \_\_\_\_\_
3. Number of Components: \_\_\_\_\_
4. Volume per ampul (select): 1mL, 2mL, 5mL, 10mL or other \_\_\_\_\_ mL
5. Quantity of ampuls: \_\_\_\_\_
6. Testing and documentation that best meet your requirements:
  - Gravimetric Documentation: Lot Sheet with balance printout attached.
  - Qualitative Documentation: Certificate of Composition, Chromatogram, and Gravimetric Documentation.
  - Quantitative Documentation: Certificate of Analysis and Data Pack.

7. Compound(s) (list or attach sheet)	CAS Number	Concentration
Compound 01: _____	_____	_____
Compound 02: _____	_____	_____
Compound 03: _____	_____	_____
Compound 04: _____	_____	_____
Compound 05: _____	_____	_____

8. Concentration Units
  - mg/mL
  - µg/mL
  - ng/mL
  - vol./wt. %
  - wt./wt. %
  - other \_\_\_\_\_

### Contact Information:

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Company/Location: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ FAX #: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

#### U.S. Customers

FAX#: (814) 355-2895

email: standards@restek.com

online form: www.restek.com/solutions

#### International Customers

Contact Your Restek Representative.

Restek Trademarks: MXT, Rtx, Silcosteel, Restek logo.

ALL mixtures are produced in accordance with our ISO 9001:2000 registration. Analytical balances are calibrated daily at seven mass levels using NIST traceable weights. ALL raw materials used are a minimum of 97% pure unless otherwise specified.



Lit. Cat.# 59382C

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Restek U.S. • 110 Benner Circle • Bellefonte, PA 16823 • 814-353-1300 • 800-356-1688 • fax: 814-353-1309 • www.restek.com

Restek France • phone: 33 (0)1 60 78 32 10 • fax: 33 (0)1 60 78 70 90 • e-mail: restek@restekfrance.fr

Restek Ireland • phone: 44 2890 814576 • fax: 44 2890 814576 • e-mail: restek@restek.com

Thames Restek U.K. LTD • phone: 44 1494 563377 • fax: 44 1494 564990 • e-mail: sales@thamesrestek.co.uk

Restek GmbH • phone: +49 (0) 6172 2797 0 • fax: +49 (0) 6172 2797 77 • e-mail: info@restekgmbh.de

