

# Bisphenol Analog Standards

Bisphenol A (2,2'-bis(4-hydroxyphenyl)propane, BPA) has been used in commercial and industrial applications since the 1970's. It has been the subject of numerous toxicological studies due to human exposure from leachate originating from polycarbonate plastics and epoxy-lined food and drink containers.

The evidence of the toxic effects of BPA has led to restrictions and regulations, resulting in its replacement in commercial products with related compounds. Several chemicals with structural similarity to BPA (ie. two hydroxyl phenyl moieties) have been used as alternatives in the manufacture of polycarbonate plastics and epoxy resins. 4,4'-sulfonyldiphenol (BPS) and 4,4'-dihydroxydiphenylmethane (BPF) are the two main substitutes. However, their similarity to BPA has led to their monitoring and testing for human exposure and toxicity as well.

In addition to the BPA analogs, there has been increased scrutiny of bisphenol A diglycidyl ether (BADGE) which is a widely used building block of epoxy resin. Studies have shown that it also might be linked to adverse human health effects.

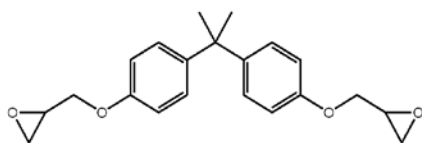
AccuStandard has recognized the need for a comprehensive product line of these BPA related compounds; and is offering reference standards for eight BPA analogs as well as the BADGE starting material.



## References:

1. Environ. Sci. Technol. 2012, 46, 9138-9145
2. Environ. Sci. Technol. 2012, 46, 12968-12976
3. Environ. Sci. Technol. 2012, 46, 11558-11565

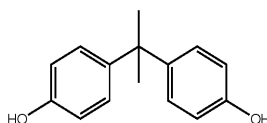
## Bisphenol A diglycidyl ether (BADGE)



CAS 1675-54-3 MF  $C_{21}H_{24}O_4$  MW 340.41  
log Kow 3.8 PS S SOL MeOH SG 1.16 g/cm<sup>3</sup>  
MP 8-12 °C BP >200 °C FP N/A

| Matrix           | Cat. No.   | Unit  |
|------------------|------------|-------|
| NEAT             | BADGE-001N | 50 mg |
| 10 mg/mL in MeOH | BADGE-001S | 1 mL  |

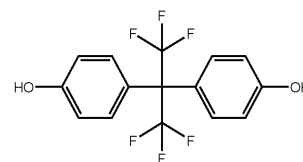
## Bisphenol A (BPA)



CAS 80-05-7 MF  $C_{15}H_{16}O_2$  MW 228.29  
log Kow 3.43 PS S SOL Acetone, Benzene, Ether  
SG 1.14 g/cm<sup>3</sup> MP 156 °C BP 220 °C FP 192 °C

| Matrix           | Cat. No. | Unit  |
|------------------|----------|-------|
| NEAT             | BPA-A-N  | 50 mg |
| 10 mg/mL in MeOH | BPA-A-S  | 1 mL  |

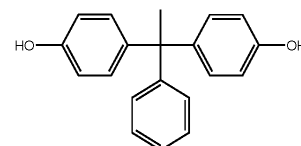
## Bisphenol AF



CAS 1478-61-1 MF  $C_{15}H_{10}F_6O_2$  MW 336.23  
log Kow 4.47 PS S SG 1.45 g/cm<sup>3</sup> MP 125-126 °C  
BP 344-345 °C FP 162 °C

| Matrix           | Cat. No. | Unit  |
|------------------|----------|-------|
| NEAT             | BPA-AF-N | 50 mg |
| 10 mg/mL in MeOH | BPA-AF-S | 1 mL  |

## Bisphenol AP



CAS 1571-75-1 MF  $C_{20}H_{18}O_2$  MW 290.36  
log Kow 4.86 PS S SG 1.18 g/cm<sup>3</sup> MP 182-183 °C  
BP 473-475 °C FP 222 °C

| Matrix           | Cat. No. | Unit  |
|------------------|----------|-------|
| NEAT             | BPA-AP-N | 50 mg |
| 10 mg/mL in MeOH | BPA-AP-S | 1 mL  |



| Property Key |                                       |
|--------------|---------------------------------------|
| CAS          | Chemical Abstract Service Number      |
| MF           | Molecular Formula                     |
| MW           | Molecular Weight                      |
| PS           | Physical State (Solid, Liquid)        |
| SOL          | Solubility                            |
| SG           | Specific Gravity (g/cm <sup>3</sup> ) |
| MP           | Melting Point (°C)                    |
| BP           | Boiling Point (°C)                    |
| FP           | Flash Point (°C)                      |



**AccuStandard®**  
Leader in Analytical Reference Standards

ISO Guide 34 • 17025 • 9001

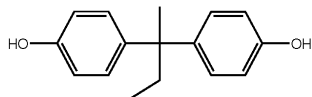
Additional Bisphenol Analog Standards on back side

©AccuStandard 2013

203-786-5290 • 800-442-5290 • www.AccuStandard.com

# Bisphenol Analog Standards

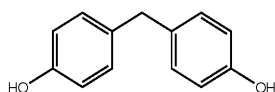
## Bisphenol B



**CAS** 77-40-7 **MF** C<sub>16</sub>H<sub>18</sub>O<sub>2</sub> **MW** 242.31  
**log Kow** 4.13 **PS** S **SG** 1.12 g/cm<sup>3</sup> **MP** 138-140 °C  
**BP** 412-414 °C **FP** 196 °C

| Matrix           | Cat. No.     | Unit  |
|------------------|--------------|-------|
| NEAT             | BPA-B-N-10MG | 10 mg |
| 10 mg/mL in MeOH | BPA-B-S      | 1 mL  |

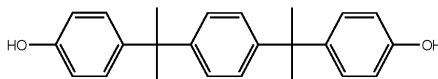
## Bisphenol F



**CAS** N/A **MF** C<sub>15</sub>H<sub>12</sub>O<sub>2</sub> **MW** 200.23  
**log Kow** 2.91 **PS** S **SG** 1.21 g/cm<sup>3</sup> **MP** 128-130 °C  
**BP** 389-390 °C **FP** 193 °C

| Matrix           | Cat. No.     | Unit  |
|------------------|--------------|-------|
| NEAT             | BPA-F-N-10MG | 10 mg |
| 10 mg/mL in MeOH | BPA-F-S      | 1 mL  |

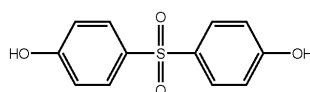
## Bisphenol P



**CAS** N/A **MF** C<sub>24</sub>H<sub>26</sub>O<sub>2</sub> **MW** 346.46  
**log Kow** 6.25 **PS** S **SG** 1.11 g/cm<sup>3</sup> **MP** 199-200 °C  
**BP** 514-515 °C **FP** 230 °C

| Matrix           | Cat. No. | Unit  |
|------------------|----------|-------|
| NEAT             | BPA-P-N  | 50 mg |
| 10 mg/mL in MeOH | BPA-P-S  | 1 mL  |

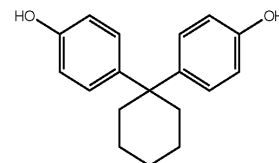
## Bisphenol S



**CAS** N/A **MF** C<sub>12</sub>H<sub>10</sub>O<sub>4</sub>S **MW** 250.27  
**log Kow** 1.65 **PS** S **SG** 1.43 g/cm<sup>3</sup> **MP** 176-177 °C  
**BP** 505-506 °C **FP** 259 °C

| Matrix           | Cat. No. | Unit  |
|------------------|----------|-------|
| NEAT             | BPA-S-N  | 50 mg |
| 10 mg/mL in MeOH | BPA-S-S  | 1 mL  |

## Bisphenol Z



**CAS** N/A **MF** C<sub>18</sub>H<sub>20</sub>O<sub>2</sub> **MW** 268.35  
**log Kow** 5.00 **PS** S **SG** 1.17 g/cm<sup>3</sup> **MP** 165-166 °C  
**BP** 440-441 °C **FP** 207 °C

| Matrix           | Cat. No. | Unit  |
|------------------|----------|-------|
| NEAT             | BPA-Z-N  | 50 mg |
| 10 mg/mL in MeOH | BPA-Z-S  | 1 mL  |

### Property Key

|            |                                       |
|------------|---------------------------------------|
| <b>CAS</b> | Chemical Abstract Service Number      |
| <b>MF</b>  | Molecular Formula                     |
| <b>MW</b>  | Molecular Weight                      |
| <b>PS</b>  | Physical State (Solid, Liquid)        |
| <b>SOL</b> | Solubility                            |
| <b>SG</b>  | Specific Gravity (g/cm <sup>3</sup> ) |
| <b>MP</b>  | Melting Point (°C)                    |
| <b>BP</b>  | Boiling Point (°C)                    |
| <b>FP</b>  | Flash Point (°C)                      |



# AccuStandard®

ISO Guide 34 • ISO/IEC 17025 • ISO 9001

125 Market Street New Haven, CT 06513 USA  
 AccuStandard.com 203-786-5290 Fax 203-786-5287