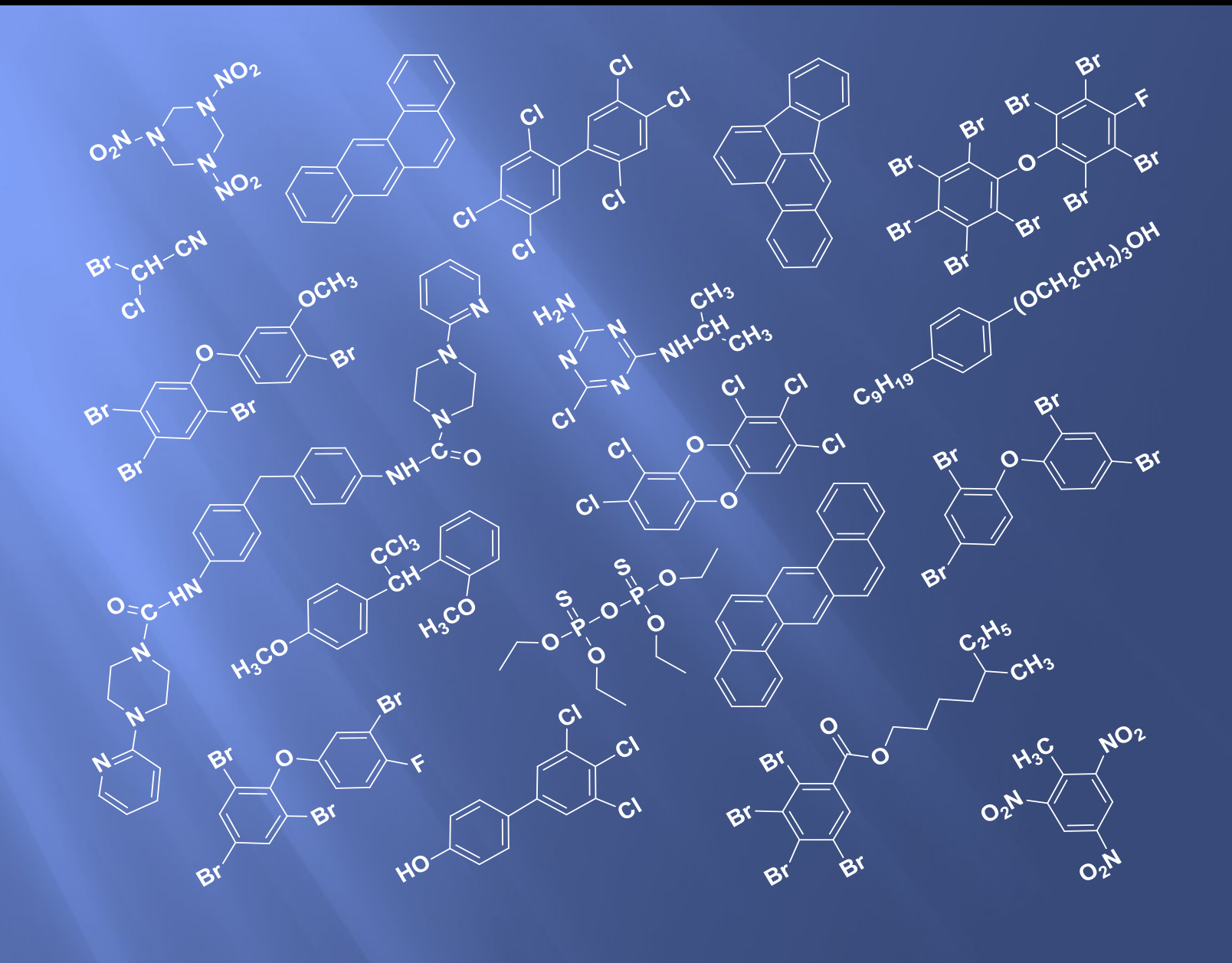
Synthesis Capabilities

Analytical Chemical Reference Standards



AccuStandard®

Custom Synthesis

The AccuStandard Synthesis Department employs several PhD Organic Chemists with many years of pertinent academic and industrial experience. The experienced staff has developed hundreds of pure chemical compounds for companies and governmental agencies around the world. The well-equipped laboratory has made many notable synthesis projects possible. AccuStandard specializes in synthesizing chemicals of high purity to be used as reference standards. Our custom synthesis capabilities range from milligram to kilogram scale.

Analytical Capabilities

- GC-MS, GC-FID, GC-ECD
- HPLC/UV, LC-MS-MS
- ICP, ICP-MS
- access to additional analytical instrumentation possible if necessary

Synthesis and Purification

- Milligram to Kilogram Glassware
- Inert Conditions Equipment
- Microwave Synthesis System
- High Performance Flash Chromatography
- Distillation Equipment – High Vacuum Distillation, Molecular Distillation (Kugelrohr), and Spinning Band Columns
- Parr Pressure and Hydrogenation Reactor

AccuStandard is renowned for its quick response to customer requests for new compounds and its partnership in developing new methods. For example, the offering of a wide variety of nonyl- and octylphenol ethoxylate derivatives led to the development of ASTM methods D7065-06 and D7485. The company's Synthesis Department implements the design and manufacture of important and unique products. Significant pioneering achievements include the synthesis of all 209 PCB congeners and all of the 209 PBDE (polybrominated diphenyl ethers) congeners. Among the more recent introductions are the hydroxy and methoxy PBDE congeners and mixed bromo/chloro hydroxy and methoxy diphenyl ethers. The syntheses of pesticides, PCBs, PBDEs, PAHs, explosives and other organic pollutants, as well as their metabolites, are an integral part of the department's efforts. Fluorinated PBDEs, synthesized in our lab, have been used to substitute the expensive isotopically labelled PBDE surrogates. Also, synthesis of the complete set of ethanesulfonic acid (ESA) and oxanilic acid (OA) pesticide derivatives has resulted in the addition of reference standards for EPA method 535.

About AccuStandard

Founded in 1986, AccuStandard has grown to the current team of 70 people. The company started in a small business incubator co-sponsored by Yale University, The City of New Haven and the State of Connecticut at the former site of Olin Chemical Company in New Haven, Connecticut, USA. Outgrowing that facility, AccuStandard moved across town in 1998 into a fully modernized facility of 37,000 square feet of laboratories, office and storage space. AccuStandard is now one of the leading companies in the world specializing in Chemical Reference Standards.

AccuStandard ships products to over 108 countries and maintains a distributor network in 65 of those countries. Since its beginning, the product line has grown to include over 11,000 Reference Standard products and twice that number of special formulations which have been developed for specific customer needs. Standards include those for analysis of the most important EPA Methods, Pesticide Residue Screening, Flame Retardants, Biofuels, Plastic Additives, Dyes, Explosives, UOP and ASTM Methods and up-graded products for PIANO and Physical Property analyses.

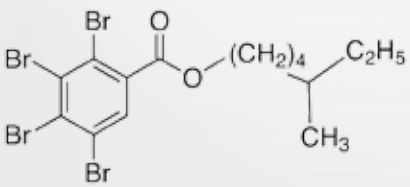
AccuStandard's quality system is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001.

AccuStandard owes its success in large part to the excellence, loyalty and dedication of its staff. We look forward to serving our customers for many years to come.

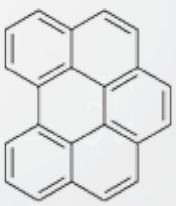
AccuStandard's Custom Synthesized Products

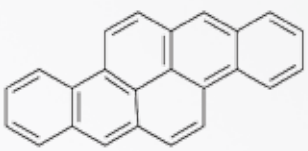
- PCBs (all 209 congeners), & hydroxy, methoxy, and methylsulfonyl metabolites
- Chloro- and bromodibenzodioxins and furans
- PBDEs (all 209 congeners) & hydroxy, methoxy, and chloro metabolites
- Fluorinated PBDEs
- Alpha-, beta- and gamma-hexabromocyclododecane (HBCD)
- Other Brominated Flame Retardants
- PBBs
- PAHs, nitro-PAHs, methyl-PAHs
- Pesticides and metabolites
- Explosives and metabolites
- Nonyl- and octylphenol ethoxylates
- Mono- and di-phthalate esters
- Organophosphates
- Other rare chemical

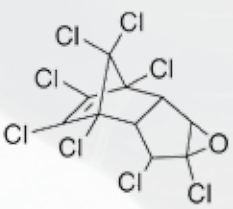
Some Examples of Compounds



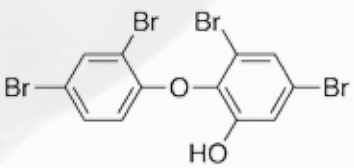
2-ethylhexyltetrabromobenzoate


benzo[ghi]perylene

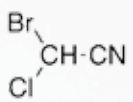

dibenzo[ah]pyrene



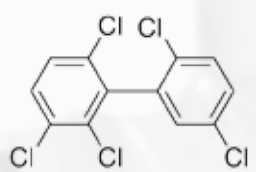
oxychlordane



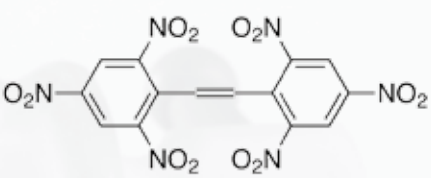
6-hydroxy-2,2',4,4'-tetrabromodiphenylether



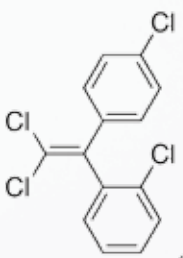
bromochloroacetonitrile



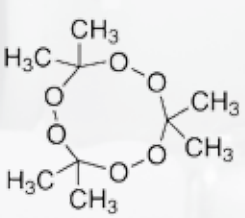
2,2'3,5',6-pentachlorobiphenyl



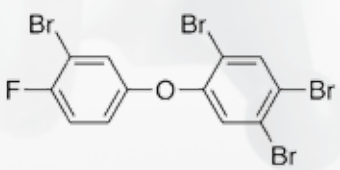
HNS



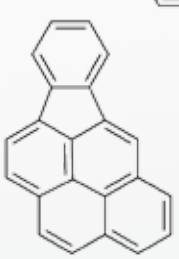
o,p'-DDE



TATP



4'-fluoro-2,3',4,5-tetrabromodiphenylether


indeno[1,2,3-cd]pyrene

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