



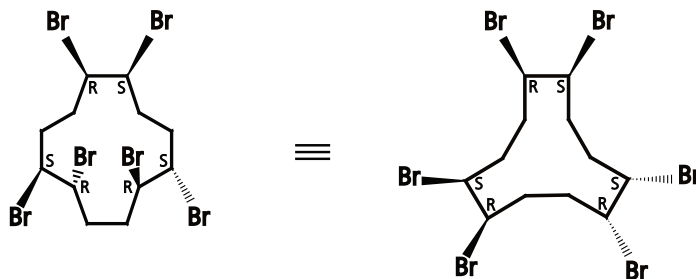
NEW PRODUCTS

DELTA (δ) AND EPSILON (ϵ) HEXABROMOCYCLODODECANE ISOMERS

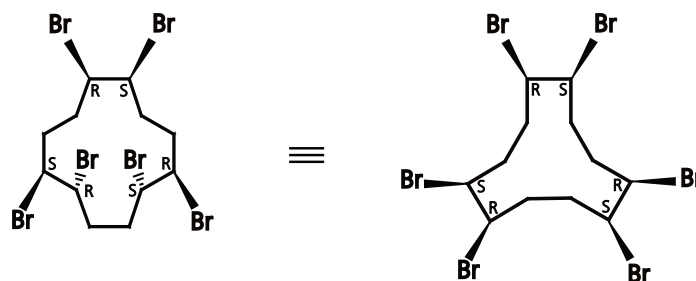
Hexabromocyclododecane (HBCD) is a widely used brominated flame retardant (BFR) utilized primarily as an additive in polystyrene foams and in minor applications such as in residential, commercial and transportation upholstery, draperies and wall coverings. Commercial HBCD is a mixture of mainly three diastereomers; alpha(α)-, beta(β)- and gamma(γ)-HBCD.

Recent work has revealed the presence of two minor HBCD isomers, delta(δ)- and epsilon(ϵ)-HBCD, in the technical mixture. However, the identity of these HBCDs could not be confirmed due to a lack of reference standards.

In response to this need, **WELLINGTON** has recently completed the synthesis of both native δ - and ϵ -HBCD.



δ -HBCD; (1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane



ϵ -HBCD; (1R,2S,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane

The availability of these additional HBCD isomers as reference standard solutions should permit scientists to achieve a more complete understanding of the impact of HBCD on the environment.

A complete listing of our current inventory of native and mass-labelled HBCD isomers can be viewed on the following page.

NATIVE HEXABROMOCYCLODODECANE ISOMERS

Catalogue Number	Product (toluene solution)	Qty/Conc
aHBCD	α -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
bHBCD	β -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
gHBCD	γ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
dHBCD	δ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
eHBCD	ϵ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml

¹³C-LABELLED HEXABROMOCYCLODODECANE ISOMERS

Catalogue Number	Product (toluene solution)	Qty/Conc
MaHBCD	α -1,2,5,6,9,10-Hexabromo[¹³ C ₁₂]cyclododecane	1.2 ml 50 μ g/ml
MbHBCD	β -1,2,5,6,9,10-Hexabromo[¹³ C ₁₂]cyclododecane	1.2 ml 50 μ g/ml
MgHBCD	γ -1,2,5,6,9,10-Hexabromo[¹³ C ₁₂]cyclododecane	1.2 ml 50 μ g/ml

DEUTERATED HEXABROMOCYCLODODECANE ISOMERS

Catalogue Number	Product (toluene solution)	Qty/Conc
DaHBCD	d18- α -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
DbHBCD	d18- β -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml
DgHBCD	d18- γ -1,2,5,6,9,10-Hexabromocyclododecane	1.2 ml 50 μ g/ml

These products are available for immediate shipping. For pricing information please contact the distributor that serves your area, or by e-mail at info@well-labs.com

