

# BC-537

## Deuterated Liquid Scintillator

This liquid scintillator is based on specially purified deuterated benzene. It is particularly useful as a neutron detector and in the study of specific interactions such as n + D. BC-537's appreciable pulse shape discrimination properties also make it useful for neutron-gamma discrimination.

BC-537 is encapsulated in Saint-Gobain Crystals & Detectors' range of glass and aluminum cells.

In addition to BC-537, Saint-Gobain Crystals & Detectors supplies deuterated liquid scintillators having higher D:C ratios or higher D:H ratios.

### Scintillation Properties –

Light Output% Anthracene .....	61
Wavelength of maximum emission, nm .....	425
Decay time, principal component, ns .....	2.8

### Atomic Composition –

No. of D Atoms per cc .....	$4.06 \times 10^{22}$
No. of H Atoms per cc .....	$3.55 \times 10^{20}$
No. of C Atoms per cc .....	$4.10 \times 10^{22}$
D:H Ratio .....	114:1
D:C Ratio .....	0.99
No. of electrons per cc .....	$2.87 \times 10^{23}$

### General Technical Data –

Density (20°C) .....	0.954 g/cc
Refractive Index .....	1.50
Flash Point .....	-11°C

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Emission Spectrum—

