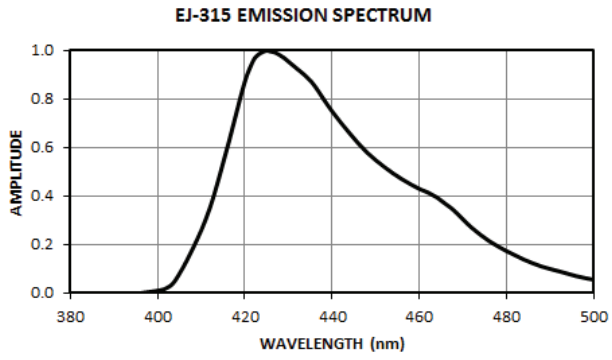
DEUTERATED LIQUID SCINTILLATOR
EJ-315

EJ-315 is based on highly purified deuterated benzene and is useful for fast neutron research. A particularly highly enriched deuterated benzene is employed to achieve the very high D:H ratio of 141:1. A non-deuterated version, EJ-315H, is also available for comparison studies. EJ-315H is based on normal standard benzene, but the formulae of the two scintillators are otherwise identical. The properties of each are presented below.

Because of the toxic nature of benzene, it is strongly recommended that the liquids be ordered in the encapsulated form so you need only to mount your photomultiplier tubes in order to put the scintillator into service.

PROPERTIES	EJ-315	EJ-315H
Light Output (% Anthracene)	60	60
Scintillation Efficiency (photons/1 MeV e-)	9,200	9,200
Wavelength of Maximum Emission (nm)	425	425
Decay Time, Short Component (ns)	3.5	3.5
Bulk Light Attenuation Length (m)	> 3	> 3
Specific Gravity	0.954	0.878
Refractive Index	1.498	1.501
Flash Point (°C)	-11	-11
Boiling Point (°C at 1 atm)	79	80
D Atoms per cm³ ($\times 10^{22}$)	4.06	-
H Atoms per cm³ ($\times 10^{22}$)	0.0287	4.04
C Atoms per cm³ ($\times 10^{22}$)	4.10	4.06
Electrons per cm³ ($\times 10^{23}$)	2.87	2.84



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