



BIODEGRADATION OF ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDES (ADBAC)

Applicable to these current Stepan products:

BTC® 50	BTC® 65	BTC® 776
BTC® 824	BTC® 8248	BTC® 8249
BTC® 835	BTC® 8358	STEPANQUAT® 50 NF
STEPANQUAT® 65 NF	STEPANQUAT® 8358	BTC® 8358 F
STEPANQUAT® 50	STEPANQUAT® 65	

Applicable to these inactive Stepan products:

BTC® 2565	BTC® 2568	BTC® 824 P100
STEPANQUAT® 835		

Biodegradation Information:

Alkyl Dimethyl Benzyl Ammonium Chlorides (ADBAC) applications are wide ranging, from disinfectant formulations to microbial corrosion inhibition, to wood preservation.

Number of biodegradation studies conducted for the ADBAC quats show these products to undergo extensive primary and ultimate (CO₂ production) biodegradation. DOC Die-away studies have been found to reach 85% biodegradation within 5 days⁽¹⁾. Ultimate biodegradation of benzylalkonium chlorides have been shown to reach up to 85% in 28 days⁽²⁾. Removal of ADBAC compounds during a SCAS removability test show removal rates of 100%⁽³⁾.

The ready biodegradation study (OECD test method 301B) conducted on a Stepan ADBAC product show these compounds to be readily biodegradable (95.5% in 28 days)⁽⁴⁾.

References:

(1-3) EPA Registrartion Eligibility Decisions for ADBAC quats.

(4) Stepan Study 05-018A

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