

Paper 25: OILS AND DISPERSANTS IN MANGROVE AND SEAGRASS AREAS

Extract from Thorhaug (1987)

TABLE 1: Tropical and Subtropical Seagrass Dispersant Oil and Oil Effects on Seagrasses

LOCATION	AUTHOR & DATE	TYPE	DISPERSANT USE & DILUTION	CONC. OF DISPERSANT	AMOUNT OF SPILL	DATE	RESOURCE AFFECTED	IMPACT	DISPERSANT EFFECT
	Baca and Getter (1985)	LAB. out of doors	Corexit 9527	50 ppm oil 1:20 24 hr.	50 ppm oil lab.	1984	<i>Thalassia testudinum</i>	LD 50 12 & 96 hr bioassays oil 8 dispersed oil LD 50 vs. time a conc.	oil with dispersant has lower toxicity than without dispersant.
Miami, FL.	Thorhaug & Marcus, (1985)	Lab. out doors	Corexit 9527 1:20	La Crude Murban	Lab.	1983-84	<i>Thalassia Halodule Syringodium</i>	LD 50 vs. time a conc.	at medium conc. high high at 5 to 100 hr.
Miami, FL.	Thorhaug & Marcus, (1985)	Lab. out doors	Corexit 9527 1:20	La. Crude Murban					
Miami, FL.	Thorhaug & Marcus, (1967a)	Lab. out doors	ARCO D-609 1:10	La. Crude Murban			<i>Thalassia Halodule Syringodium</i>	LD 50 5 hr, 100 hr.	low to medium low to medium low to medium at 75 a 125ml medium to high high high
Miami, FL.	Thorhaug & Marcus, (1967b)	Lab. out doors	Conco K (K) 1:10	La. Crude Murban			<i>Thalassia Halodule Syringodium</i>	LD 50 at 5 & 100 hr.	low to medium low to medium low to medium at 75 a 125ml medium to high high high
Panama	Getter et al. (1966)	field	Corexit 9527	50 ppm @ 24 hr.	Exp. Prudhoe Bay Crude	1985	<i>Thalassia testudinum</i>	none to <i>Thalassia</i>	no effect on <i>Thalassia</i>
Miami, FL.	Thorhaug & Marcus, (1987a)	Lab. out doors	Corexit 9556	25 a 75 ml oil 1:20 disp. n 100,000cc	La. Crude exper.	1986	<i>Thalassia Halodule Syringodium</i>	100 hr.	low medium low to medium low low medium low low to medium low low med-low low low-med/low
Miami, FL.	Thorhaug & Marcus, (1967a)	Lab. out doors	OFC-D-607	W La. Crude 75 a 125 ml oil La. Crude	La. Crude exper.	1986	<i>Thalassia Halodule Syringodium</i>	100 hr.	low medium low low medium low low to medium low low med-low low low-med/low
Miami, FL.	Thorhaug & Marcus, (1967b)	Lab. put doors	Cold Clean 500	La. Crude 5 & 125 ml in 10,000cc SW		1966	<i>Thalassia Halodule Syringodium</i>	LD 50 100 hr.	low to medium low low med-low low low-med/low
Miami, FL.	Thorhaug & Marcus	Lab.	Finsol OSP-7	La Crude 5 8.125 ml in 30,000cc SW		1966	<i>Thalassia Halodule Syringodium</i>	LD 50 100 hr.	low med-low low low-med/low

TABLE 2: Dispersed Oil and Oil Effects on Mangroves

LOCATION	AUTHOR & DATE	TYPE	DISPERSANT USE & DILUTION	TYPE OF OIL	AMOUNT OF SPILL	DATE	RESOURCE AFFECTED	IMPACT	DISPERSANT EFFECT
Panama	Getter, 1986	field	Corexit 9527 24 hr. 1:20	Prudhoe Bay crude	Exp.	1964	Mangroves	Defoliation Death	Dispersed oil before it reached mangroves.
Turkey Pt. Biscayne Bay, FL.	Teas et al 1987	field	Corexit 9527 1:20	La. Crude	Exp.		<i>R. mangle</i>		
Coast on Caribbean side of Panama	Cubit et al 1987	Accidental	Corexit 9527, approx. 21,000 litres 1:20	med. wt. crude	55,000-60,000	Apr 27 1966	<i>R. mangle</i>	Defoliation Death	
Coast on Caribbean side of Panama	Getter & Ballou 1987	Exper.	Corexit 9527 1:20	Prudhoe Bay crude	Exp.	1965	<i>R. mangle</i>	28% trees defoliated	No defoliation at sites with dispersant
South Florida	Teas, 1986	field	Corexit 9527 1:20	50 ppm	Exp.	1962-66	<i>R. mangle</i>		
Panama	Teas, 1987	field spill	Corexit 9527 1:20	med. wt. crude		fall, 1966	mangroves	observed mangrove death	If dispersed before oil on mangroves, less mortality