

Supplemental Table S2. Tracheal Lesions in Rats Exposed to α -Diketones

Tracheal Lesion	2,3-Butanedione		2,3-Pentanedione		2,3-Hexanedione	
	Post-Exposure	Recovery	Post-Exposure	Recovery	Post-Exposure	Recovery
No. animals evaluated:	5	5	5	3	6	6
Respiratory Epithelium	200 ppm					
Necrosis	5 ^a (3.0) ^b	1 (1.0)	5 (2.6)	0	0	0
Squamous metaplasia	0	0	1 (2.0)	0	6 (2.5)	0
Hyperplasia	4 (1.0)	3 (1.0)	3 (1.0)	0	2 (1.5)	0
Ulcer	1 (3.0)	0	1 (2.0)	0	0	0
Chronic/active Inflammation	5 (2.0)	2 (1.0)	4 (1.8)	0	3 (1.3)	0
Intraluminal Fibrosis	0	3 (1.0) ^c	0	0	0	0
No. animals evaluated:	6	9	6	9	6	6
Respiratory Epithelium	150 ppm					
Necrosis	4 (3.0)	3 (1.0)	3 (1.7)	3 (1.3)	0	0
Squamous metaplasia	3 (1.7)	1 (1.0)	6 (2.3)	2 (1.0)	1 (1.0)	0
Hyperplasia	0	1 (1.0)	3 (1.3)	1 (1.0)	1 (1.0)	0
Ulcer	4 (1.5)	5 (2.6)	2 (1.5)	5 (2.8)	1 (2.0)	0
Chronic/active Inflammation	6 (1.3)	4 (2.0)	6 (1.5)	3 (1.0)	3 (1.0)	1 (1.0)
Intraluminal Fibrosis	3 (1.0) ^c	6 (1.0)	0	1 (1.0)	0	0
No. animals evaluated:	8	7	7	8	6	6
Respiratory Epithelium	100 ppm					
Squamous metaplasia	8 (2.3)	0	6 (1.7)	2 (1.0)	1 (1.0)	0
Hyperplasia	8 (1.6)	0	4 (2.0)	1 (1.0)	3 (1.0)	0
Chronic/active Inflammation	8 (1.4)	0	5 (1.2)	0	2 (1.0)	1 (1.0)

Rats were exposed to α -diketones by inhalation 6 hr/day/5 days/week for 12 exposures. Tissues were collected from half the animals on the morning after the last exposure (post-exposure group) and from the remaining animals following an additional 2 weeks without further exposure (recovery group).

^a Number of animals with lesions

^b Average severity grade in parentheses where: 1=minimal, 2=mild, 3=moderate, 4=marked

^c Number of animals with intraluminal fibrosis followed by average severity grade in parentheses where: 1-5 lesions = minimal, 6-10 lesions= mild, 11-15 lesions = moderate, 16 or more lesions = marked.