

Appendix 1. Summary table of genetic and related effects of process streams and products from petroleum refining

Nonmammalian systems										Mammalian systems																						
Prokaryotes		Lower eukaryotes		Plants			Insects			<i>In vitro</i>						<i>In vivo</i>																
										Animal cells			Human cells			Animals			Humans													
D	G	D	R	G	A	D	G	C	R	G	C	A	D	G	S	M	C	A	T	I	D	G	S	M	C	DL	A	D	S	M	C	A
Process streams																																
+																																
Crude oils																																
± ^{b,c}																																
+ ^{1,c} - ^{1,c} - ¹ ? - ¹																																
Gasoline^d																																
- ^{1,e} + ^{1,f} + ± ^{1,g} + ¹ - ¹ - ¹ + -																																
Jet fuel																																
- + ¹ + ¹																																
Diesel fuel																																
η ^h - ^{1,i} - ¹ - ¹ + ¹																																
Fuel oils:																																
Residual fuel oil																																
- ^{1,j} - ^{1,j} + ^{1,k}																																
Kerosene-type fuel oil																																
- ¹ - ¹ - ¹																																
Fuel oil No. 2																																
+ ¹ + ¹ + ^{1,m} - ^{1,m} + ¹																																

¹One study

^aPositive effects were observed in sewage-treatment workers in an oil refinery; ^bextracts of crude oils; ^cneutral aromatic fractions of crude oil; ^dunleaded unless otherwise specified; ^eDMSO extract of unleaded gasoline and residue from evaporation of unleaded gasoline; ^fleaded gasoline; ^gpositive in one study using a DMSO extract and a residue from evaporation; ^hdifferent results found with samples of different diesel fuels; ⁱaliphatic and aromatic fractions; ^jbunker fuel; ^kB-class heavy oil; ^lincluding one study with an aromatic fraction; ^mtwo aromatic fractions of fuel oil No. 2