

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Pinus pinea

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ALANINE	Seed	12540.0	15000.0	1.029690020598315	--
14	ARGININE	Seed	46680.0	71600.0	1.988442328859929	--
0	ASH	Seed	43000.0	47155.0	-0.0218096996365896	--
3	ASPARTIC-ACID	Seed	21870.0	26000.0	0.30281554958855367	--
28	CALCIUM	Seed	260.0	280.0	-0.7100985069314802	USDA's Ag Handbook 8 and sequelae)
0	CARBOHYDRATES	Seed	116000.0	152415.0	-1.474378426646367	--
12	COPPER	Seed	10.0	11.0	-0.34599137524950224	USDA's Ag Handbook 8 and sequelae)
2	CYSTINE	Seed	4350.0	4660.0	1.0505075826425414	USDA's Ag Handbook 8 and sequelae)
0	FAT	Seed	474000.0	560500.0	1.5544626184043342	--
15	FIBER	Seed	8000.0	10000.0	-0.9852748951978426	--
0	GADOLEIC-ACID	Seed	9680.0	10375.0	0.8285874248416172	USDA's Ag Handbook 8 and sequelae)
8	GLUTAMIC-ACID	Seed	40840.0	59800.0	0.7630975425103956	--
12	GLYCINE	Seed	12230.0	15000.0	0.5852430383191146	--
7	HISTIDINE	Seed	5750.0	7475.0	0.3591383436262607	--
6	IRON	Seed	92.0	100.0	-0.2360003199095645	USDA's Ag Handbook 8 and sequelae)
3	ISOLEUCINE	Seed	9330.0	10700.0	0.026597920645775562	--
0	KILOCALORIES	Seed	5150.0	5850.0	0.7757634089419784	--
2	LEUCINE	Seed	17300.0	20600.0	0.336791424030698	--
27	LINOLEIC-ACID	Seed	206890.0	221725.0	0.9819281968614009	USDA's Ag Handbook 8 and sequelae)
0	LINOLENIC-ACID	Seed	6540.0	7010.0	-0.4574849247622254	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Seed	9010.0	9655.0	-0.3310001555512119	USDA's Ag Handbook 8 and sequelae)
15	METHIONINE	Seed	4300.0	6050.0	0.44806218941864273	--
13	MUFA	Seed	190760.0	204435.0	0.6873347457771549	USDA's Ag Handbook 8 and sequelae)
39	NIACIN	Seed	35.0	38.0	-0.14625954869692315	USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Seed	179000.0	191835.0	0.5978961239017492	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	PALMITIC-ACID	Seed	36720.0	39350.0	0.11231713015623214	USDA's Ag Handbook 8 and sequelae)
2	PALMITOLEIC-ACID	Seed	2080.0	2230.0	-0.24493742392277426	USDA's Ag Handbook 8 and sequelae)
7	PHENYLALANINE	Seed	9190.0	12800.0	0.15041500504035782	--
4	PHOSPHORUS	Seed	5080.0	5445.0	0.024218427700718415	USDA's Ag Handbook 8 and sequelae)
2	PHYTOSTEROLS	Seed	1410.0	1510.0	-0.23598595676506973	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Seed	5990.0	6420.0	-0.5408573694811282	USDA's Ag Handbook 8 and sequelae)
0	PROLINE	Seed	12900.0	13900.0	0.5037488591794668	--
0	PROTEIN	Seed	240000.0	356000.0	1.0870672661060514	--
4	PUFA	Seed	213430.0	228730.0	0.936320105356505	USDA's Ag Handbook 8 and sequelae)
15	RIBOFLAVIN	Seed	2.0	3.0	-0.20090831129253928	USDA's Ag Handbook 8 and sequelae)
7	SALICYLATES	Seed	5.0	6.0	-0.3079859080069262	J. Amer. Diet. Ass. 85(8):950.
1	SERINE	Seed	10190.0	15300.0	0.9056813629393596	--
0	SFA	Seed	77970.0	83560.0	0.24259701098972458	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Seed	40.0	43.0	-0.6474574292979098	USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Seed	16720.0	17920.0	-0.1765868912362906	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Seed	6.0	9.0	0.5763820643107227	--
4	THREONINE	Seed	7610.0	8190.0	0.011754803889548075	--
29	TRYPTOPHAN	Seed	3030.0	3250.0	-0.02560908406252751	USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Seed	8780.0	11400.0	0.8475721503349954	--
3	VALINE	Seed	12410.0	15300.0	0.40500668612462515	--
0	WATER	Seed	56000.0	69750.0	-0.6057635371231872	--
77	ZINC	Seed	42.0	46.0	0.024641236256363018	USDA's Ag Handbook 8 and sequelae)