



## Certificate of Analysis

<b>Client:</b>	Revital Fertilisers	<b>Lab No:</b>	1963135	SPV1
<b>Contact:</b>	D Gibson C/- Revital Fertilisers PO Box 8045 New Plymouth 4342	<b>Date Received:</b>	14-Apr-2018	
		<b>Date Reported:</b>	27-Apr-2018	
		<b>Quote No:</b>		
		<b>Order No:</b>		
		<b>Client Reference:</b>		
		<b>Submitted By:</b>	D Gibson	

### Sample Type: Miscellaneous

Sample Name:		Compost Sample 1 13-Apr-2018	Compost Sample 2 13-Apr-2018			
Lab Number:		1963135.1	1963135.2			
Individual Tests						
Dry Matter	g/100g as rcvd	59	58	-	-	-
Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn						
Total Recoverable Arsenic	mg/kg dry wt	19	14	-	-	-
Total Recoverable Cadmium	mg/kg dry wt	0.24	0.23	-	-	-
Total Recoverable Chromium	mg/kg dry wt	35	31	-	-	-
Total Recoverable Copper	mg/kg dry wt	57	120	-	-	-
Total Recoverable Lead	mg/kg dry wt	68	34	-	-	-
Total Recoverable Nickel	mg/kg dry wt	13	14	-	-	-
Total Recoverable Zinc	mg/kg dry wt	168	178	-	-	-
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Alachlor	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Aldrin	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Atrazine	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Atrazine-desethyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Atrazine-desisopropyl	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Azaconazole	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Azinphos-methyl	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Benalaxyl	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Bendiocarb	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Benodanil	mg/kg dry wt	< 0.2	< 0.2	-	-	-
alpha-BHC	mg/kg dry wt	< 0.017	< 0.018	-	-	-
beta-BHC	mg/kg dry wt	< 0.017	< 0.018	-	-	-
delta-BHC	mg/kg dry wt	< 0.017	< 0.018	-	-	-
gamma-BHC (Lindane)	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Bifenthrin	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Bitertanol	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Bromacil	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Bromophos-ethyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Bromopropylate	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Bupirimate	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Buprofezin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Butachlor	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Captafol	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Captan	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Carbaryl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Carbofenothion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Carbofuran	mg/kg dry wt	< 0.10	< 0.10	-	-	-



**Sample Type: Miscellaneous**

<b>Sample Name:</b>		Compost Sample 1 13-Apr-2018	Compost Sample 2 13-Apr-2018			
<b>Lab Number:</b>		1963135.1	1963135.2			
Multiresidue Pesticides in Soil samples by GCMS						
Carboxin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
cis-Chlordane	mg/kg dry wt	< 0.017	< 0.018	-	-	-
trans-Chlordane	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Total Chlordane [(cis+trans)* 100/42]	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Chlorfenvinphos	mg/kg dry wt	< 0.14	< 0.15	-	-	-
Chlorfluazuron	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Chlorothalonil	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Chlorpropham	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Chlorpyrifos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Chlorpyrifos-methyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Chlortoluron	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Chlozolinate	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Coumaphos	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Cyanazine	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Cyfluthrin	mg/kg dry wt	< 0.13	< 0.13	-	-	-
Cyhalothrin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Cypermethrin	mg/kg dry wt	< 0.3	< 0.3	-	-	-
Cyproconazole	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Cyprodinil	mg/kg dry wt	< 0.10	< 0.10	-	-	-
2,4'-DDD	mg/kg dry wt	< 0.017	< 0.018	-	-	-
4,4'-DDD	mg/kg dry wt	< 0.017	< 0.018	-	-	-
2,4'-DDE	mg/kg dry wt	< 0.017	< 0.018	-	-	-
4,4'-DDE	mg/kg dry wt	< 0.017	< 0.018	-	-	-
2,4'-DDT	mg/kg dry wt	< 0.017	< 0.018	-	-	-
4,4'-DDT	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Total DDT Isomers	mg/kg dry wt	< 0.10	< 0.11	-	-	-
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Demeton-S-methyl	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Diazinon	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Dichlobenil	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Dichlofenthion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Dichlofluanid	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Dichloran	mg/kg dry wt	< 0.3	< 0.3	-	-	-
Dichlorvos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Dicofol	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Dicrotophos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Dieldrin	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Difenoconazole	mg/kg dry wt	< 0.14	< 0.15	-	-	-
Dimethoate	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Dinocap	mg/kg dry wt	< 1.2	< 1.2	-	-	-
Diphenylamine	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Disulfoton	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Diuron	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Endosulfan I	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Endosulfan II	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Endosulfan sulphate	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Endrin	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Endrin aldehyde	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Endrin ketone	mg/kg dry wt	< 0.017	< 0.018	-	-	-
EPN	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Esfenvalerate	mg/kg dry wt	< 0.14	< 0.15	-	-	-
Ethion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Etrinfos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Famphur	mg/kg dry wt	< 0.10	< 0.10	-	-	-

**Sample Type: Miscellaneous**

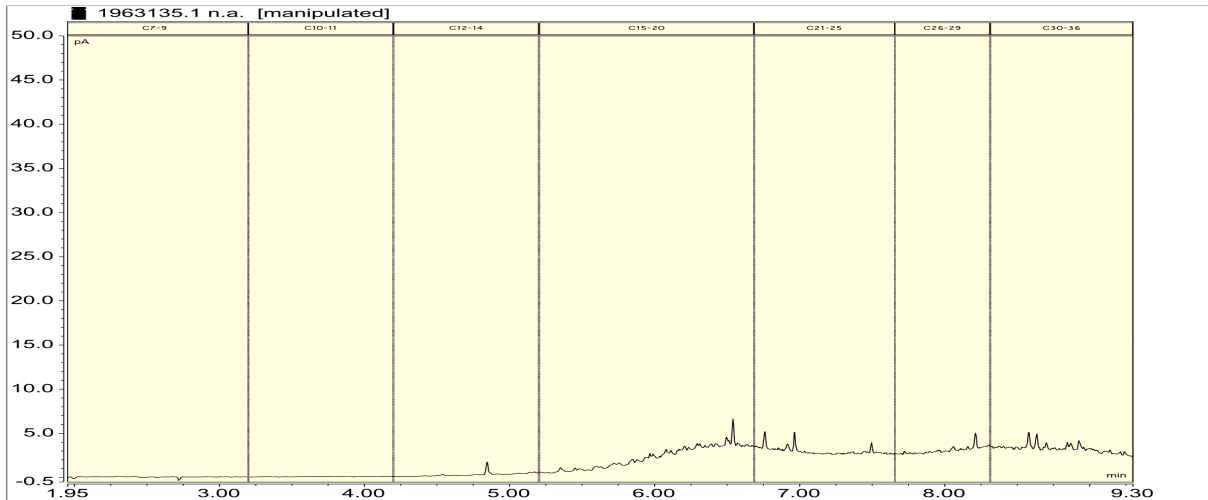
<b>Sample Name:</b>		Compost Sample 1 13-Apr-2018	Compost Sample 2 13-Apr-2018			
<b>Lab Number:</b>		1963135.1	1963135.2			
Multiresidue Pesticides in Soil samples by GCMS						
Fenamiphos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fenarimol	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fenitrothion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fenpropathrin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fenpropimorph	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fensulfothion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fenthion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fenvalerate	mg/kg dry wt	< 0.14	< 0.15	-	-	-
Fluazifop-butyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fluometuron	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Flusilazole	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Fluvalinate	mg/kg dry wt	< 0.07	< 0.08	-	-	-
Folpet	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Furalaxyl	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Haloxfop-methyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Heptachlor	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Heptachlor epoxide	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Hexachlorobenzene	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Hexaconazole	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Hexazinone	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Hexythiazox	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Imazalil	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Indoxacarb	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Iodofenphos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Isazophos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Isofenphos	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Kresoxim-methyl	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Leptophos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Linuron	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Malathion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Metalaxyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Methacrifos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Methamidophos	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Methidathion	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Methiocarb	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Methoxychlor	mg/kg dry wt	< 0.017	< 0.018	-	-	-
Metolachlor	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Metribuzin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Mevinphos	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Molinate	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Myclobutanil	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Naled	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Nitrofen	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Nitrothal-isopropyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Norflurazon	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Omethoate	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Oxadiazon	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Oxychlorane	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Oxyfluorfen	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Pacllobutrazol	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Parathion-ethyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Parathion-methyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Penconazole	mg/kg dry wt	< 0.10	< 0.10	-	-	-

Sample Type: Miscellaneous						
Sample Name:		Compost Sample 1 13-Apr-2018	Compost Sample 2 13-Apr-2018			
Lab Number:		1963135.1	1963135.2			
Multiresidue Pesticides in Soil samples by GCMS						
Pendimethalin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Permethrin	mg/kg dry wt	< 0.03	3.0	-	-	-
Phorate	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Phosmet	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Phosphamidon	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Pirimicarb	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Pirimiphos-methyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Prochloraz	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Procymidone	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Prometryn	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Propachlor	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Propanil	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Propazine	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Propetamphos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Propham	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Propiconazole	mg/kg dry wt	< 0.07	4.8	-	-	-
Prothiofos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Pyrazophos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Pyrifenox	mg/kg dry wt	< 0.14	< 0.15	-	-	-
Pyrimethanil	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Pyriproxyfen	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Quintozene	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Quizalofop-ethyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Simazine	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Simetryn	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Sulfentrazone	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Sulfotep	mg/kg dry wt	< 0.10	< 0.10	-	-	-
TCMTB [2-(thiocyanomethylthio)benzothiazole, Busan]	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Tebuconazole	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Tebufenpyrad	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Terbacil	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Terbufos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Terbumeton	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Terbuthylazine	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Terbuthylazine-desethyl	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Terbutryn	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Tetrachlorvinphos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Thiabendazole	mg/kg dry wt	< 0.5	< 0.5	-	-	-
Thiobencarb	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Thiometon	mg/kg dry wt	< 0.2	< 0.2	-	-	-
Tolyfluanid	mg/kg dry wt	< 0.05	< 0.05	-	-	-
Triadimefon	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Triazophos	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Trifluralin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Vinclozolin	mg/kg dry wt	< 0.10	< 0.10	-	-	-
Total Petroleum Hydrocarbons in Soil						
C7 - C9	mg/kg dry wt	< 10	< 11	-	-	-
C10 - C14	mg/kg dry wt	22	1,350	-	-	-
C15 - C36	mg/kg dry wt	980	7,700	-	-	-
Total hydrocarbons (C7 - C36)	mg/kg dry wt	1,000	9,100	-	-	-

1963135.1

Compost Sample 1 13-Apr-2018

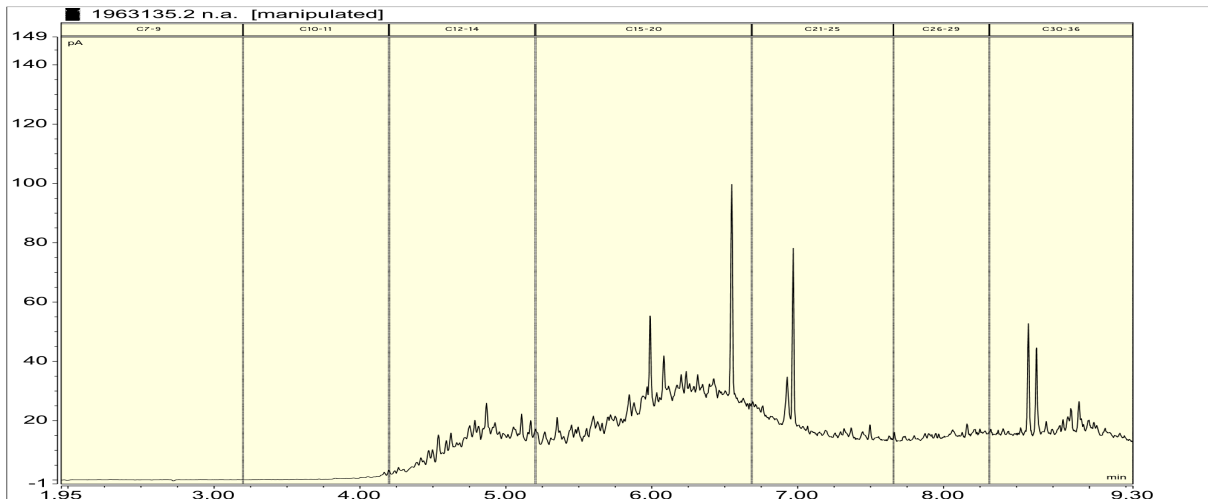
Client Chromatogram for TPH by FID



1963135.2

Compost Sample 2 13-Apr-2018

Client Chromatogram for TPH by FID



## Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.

Sample Type: Miscellaneous			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Preparation	Air dried at 35°C and sieved, <2mm fraction. Used for sample preparation. May contain a residual moisture content of 2-5%.	-	1-2
Heavy metal screen level As,Cd,Cr,Cu,Ni,Pb,Zn	Dried sample, <2mm fraction. Nitric/Hydrochloric acid digestion, ICP-MS, screen level.	0.10 - 4 mg/kg dry wt	1-2
Multiresidue Pesticides in Soil samples by GCMS	Sonication extraction, GC-MS analysis. Tested on as received sample, then results corrected to a dry weight basis using the separate Dry Matter result.	0.003 - 0.06 mg/kg dry wt	1-2
Total Petroleum Hydrocarbons in Soil*	Sonication extraction in DCM, Silica cleanup, GC-FID analysis US EPA 8015B/MfE Petroleum Industry Guidelines. Tested on as received sample [KBIs:5786,2805,10734]	8 - 60 mg/kg dry wt	1-2
Dry Matter (Env)	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1-2
Total Recoverable digestion*	Nitric / hydrochloric acid digestion. US EPA 200.2.	-	1-2

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Samples are held at the laboratory after reporting for a length of time depending on the preservation used and the stability of the analytes being tested. Once the storage period is completed the samples are discarded unless otherwise advised by the client.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

A handwritten signature in blue ink, consisting of several overlapping, stylized lines that form a unique, illegible mark.

Ara Heron BSc (Tech)  
Client Services Manager - Environmental