

CERTIFICATE OF ANALYSIS

Work Order : **EP2209644**
Client : **Kimberley Agricultural Investment**
Contact : Wayne Paul
Address : PO Box 2531
 Kunanurra 6743
Telephone : 08 9169 3113
Project : Carlton plain development
Order number : ----
C-O-C number : ----
Sampler : Wayne Paul
Site : ----
Quote number : EP/539/20
No. of samples received : 7
No. of samples analysed : 7

Page : 1 of 5
Laboratory : Environmental Division Perth
Contact : Customer Services EP
Address : 26 Rigali Way Wangara Western Australia Australia 6065

Telephone : +61-8-9406 1301
Date Samples Received : 01-Aug-2022 07:30
Date Analysis Commenced : 01-Aug-2022
Issue Date : 09-Aug-2022 17:26



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, Western Australia
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Pesticides and Phenoxyacetic Acid analysis conducted by ALS Sydney, NATA accreditation no. 825, site no 10911.
- EP234: Poor matrix spike recovery for particular compounds due to matrix interferences and high matrix spike recovery has been noted for particular compounds due to ion enhancement.
- EP234: Particular samples required dilution due to higher conductivity. LOR values have been adjusted accordingly.



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Y 3	Y 10	Y 11	Y 12	Y 13
Sampling date / time				27-Jul-2022 00:00	27-Jul-2022 00:00	27-Jul-2022 00:00	27-Jul-2022 00:00	27-Jul-2022 00:00	
Compound	CAS Number	LOR	Unit	EP2209644-001	EP2209644-002	EP2209644-003	EP2209644-004	EP2209644-005	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.43	7.66	7.68	7.32	7.95	
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L	38	12	730	508	708	
EA045: Turbidity									
Turbidity	----	0.1	NTU	40.0	15.0	280	260	340	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	1.75	0.04	<0.01	<0.01	
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.7	0.3	1.4	1.2	0.5	
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L	0.7	2.0	1.4	1.2	0.5	
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L	0.17	0.09	3.43	0.29	0.76	
EP202A: Phenoxyacetic Acid Herbicides by LCMS									
2,4-D	94-75-7	10	µg/L	<10	----	<10	<10	<10	
Triclopyr	55335-06-3	10	µg/L	<10	----	<10	<10	<10	
Fluroxypyr	69377-81-7	10	µg/L	<10	----	<10	<10	<10	
EP234: Multiresidue Pesticides									
Abamectin	71751-41-2	0.1	µg/L	<1.0	----	<0.1	<0.1	<0.1	
Atrazine	1912-24-9	0.01	µg/L	<0.10	----	<0.01	<0.01	<0.01	
Chlorantraniliprole	500008-45-7	0.1	µg/L	<1.0	----	<0.1	<0.1	<0.1	
Diuron	330-54-1	0.02	µg/L	<0.20	----	<0.02	<0.02	<0.02	
Fipronil	120068-37-3	0.01	µg/L	<0.10	----	<0.01	<0.01	<0.01	
Imazapyr	94795-74-1	10.0	µg/L	<10.0	----	<10.0	<10.0	<10.0	
Methomyl	16752-77-5	0.01	µg/L	<0.10	----	<0.01	<0.01	<0.01	
Metolachlor	51218-45-2	0.01	µg/L	<0.10	----	<0.01	<0.01	<0.01	
Oxyfluorfen	42874-03-3	1.0	µg/L	<10.0	----	<1.0	<1.0	<1.0	
Terbutylazine	5915-41-3	0.01	µg/L	<0.10	----	<0.01	<0.01	<0.01	
EP202S: Phenoxyacetic Acid Herbicide Surrogate									
2,4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	115	----	102	114	113	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		Y 14	Y 15	----	----	----
		Sampling date / time		27-Jul-2022 00:00	27-Jul-2022 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EP2209644-006	EP2209644-007	-----	-----	-----
				Result	Result	----	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	7.60	7.28	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	478	67	----	----	----
EA045: Turbidity								
Turbidity	----	0.1	NTU	190	60.0	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.08	<0.01	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.8	0.2	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	0.9	0.2	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	0.35	0.03	----	----	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
2,4-D	94-75-7	10	µg/L	----	<10	----	----	----
Triclopyr	55335-06-3	10	µg/L	----	<10	----	----	----
Fluroxypyr	69377-81-7	10	µg/L	----	<10	----	----	----
EP234: Multiresidue Pesticides								
Abamectin	71751-41-2	0.1	µg/L	----	<1.0	----	----	----
Atrazine	1912-24-9	0.01	µg/L	----	<0.10	----	----	----
Chlorantraniliprole	500008-45-7	0.1	µg/L	----	<1.0	----	----	----
Diuron	330-54-1	0.02	µg/L	----	<0.20	----	----	----
Fipronil	120068-37-3	0.01	µg/L	----	<0.10	----	----	----
Imazapyr	94795-74-1	10.0	µg/L	----	<10.0	----	----	----
Methomyl	16752-77-5	0.01	µg/L	----	<0.10	----	----	----
Metolachlor	51218-45-2	0.01	µg/L	----	<0.10	----	----	----
Oxyfluorfen	42874-03-3	1.0	µg/L	----	<10.0	----	----	----
Terbuthylazine	5915-41-3	0.01	µg/L	----	<0.10	----	----	----
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2,4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	----	119	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2,4-Dichlorophenyl Acetic Acid	19719-28-9	64	140

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(WATER) EP202A: Phenoxyacetic Acid Herbicides by LCMS

(WATER) EP202S: Phenoxyacetic Acid Herbicide Surrogate

(WATER) EP234: Multiresidue Pesticides