

C1



KAREN POWELL
CROSS COMPLIANCE
SOLUTIONS LTD
ORCHARD BARNES
CRUMP OAK FARM
LYONSHALL HR5 3JY

N839

Please quote above code for all enquiries

ANDY MATTHEWS
ABERBRAN FAWR
ABERBRAN
BRECON
POWYS
LD3 9NG

WASTE WATER (Metric Units)

Sample Reference : WASTE WATER

Sample Matrix : WASTE WATER

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

Laboratory References

Report Number 72566
Sample Number 87240

Date Received 03-OCT-2019

Date Reported 08-OCT-2019

ANALYTICAL RESULTS *on 'as received' basis.*

Determinand on a fresh weight basis	Units	Result	Amount per fresh tonne or m3	Amount applied at an equivalent total Nitrogen application of 250 kg N/ha	Units
pH 1:6 [Fresh]		6.73			
Oven Dry Solids	%	1.53	15.30	3825	kg DM
Total Kjeldahl Nitrogen	% w/w	0.100	1.00	250	kg N
Ammonium Nitrogen	mg/kg	<50	< 0.01		kg NH4-N
Nitrate Nitrogen	mg/kg	<10	< 0.01		kg NO3-N
Total Phosphorus (P)	mg/kg	139	0.32	79.58	kg P2O5
Total Potassium (K)	mg/kg	189	0.23	56.70	kg K2O
Total Magnesium (Mg)	mg/kg	34.0	0.06	14.11	kg MgO
Total Sulphur (S)	mg/kg	88.2	0.22	55.13	kg SO3
Total Copper (Cu)	mg/kg	0.737	< 0.01		kg Cu
Total Zinc (Zn)	mg/kg	2.10	< 0.01		kg Zn
Total Sodium (Na)	mg/kg	244	0.33	82.23	kg Na2O
Total Calcium (Ca)	mg/kg	150	0.15	37.50	kg Ca
Equivalent field application rate		—	1.00	250.00	tonnes or m3 / ha

The above equivalent field application rate for total nitrogen of 250 kg/ha has been provided purely for guidance purposes only.

Organic manures should be used in accordance with the Defra Code of Good Agricultural Practice and where required within the specific regulatory guidance for the spreading of that material to land. To get the most benefit from your organic manures it is recommended that you follow the principles as set out in Defra's Fertiliser Manual (RB209) or as directed by a FACTS qualified adviser.

Released by *J Doyle*

Date *08/10/19*

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS

Tel: +44 (0) 1344 886338 Fax: +44 (0) 1344 890972 Email: enquiries@nrm.uk.com www.nrm.uk.com

C1



KAREN POWELL
CROSS COMPLIANCE
SOLUTIONS LTD
ORCHARD BARNS
CRUMP OAK FARM
LYONSHALL HR5 3JY

N839

Please quote above code for all enquiries

ANDY MATTHEWS
ABERBRAN FAWR
ABERBRAN
BRECON
POWYS
LD3 9NG

WASTE WATER (Metric Units)

Sample Reference : WASTE WATER

Sample Matrix : WASTE WATER

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

Laboratory References

Report Number	72566
Sample Number	87240

Date Received	03-OCT-2019
---------------	-------------

Date Reported	08-OCT-2019
---------------	-------------

ANALYTICAL RESULTS *on 'as received' basis.*

Determinand on a fresh weight basis	Units	Result
Total Lead (Pb)	mg/kg	<0.5
Total Cadmium (Cd)	mg/kg	<0.01
Total Mercury (Hg)	mg/kg	<0.05
Total Nickel (Ni)	mg/kg	<0.2
Total Chromium (Cr)	mg/kg	0.293

Released by *J Doyle*

Date *08/10/19*

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS
Tel: +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com

NRM Laboratories is a division of Cawood Scientific Ltd, Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS. Registered Number: 05655711

How does your sample analysis compare with the 'standard' figures for organic manures?

Farmyard Manure	Dry Matter (% DM)	Total Nitrogen (Kg N/t)	Total Phosphate (Kg P ₂ O ₅ /t)	Total Potash (Kg K ₂ O/t)	Total Sulphur (Kg SO ₃ /t)	Total Magnesium (Kg MgO/t)
Cattle FYM	25	6.0	3.2	9.4	2.4	1.8
Pig FYM	25	7.0	6.0	8.0	3.4	1.8
Sheep FYM	25	7.0	3.2	8.0	4.0	2.8
Duck FYM	25	6.5	5.5	7.5	2.6	2.4
Horse FYM	25	5.0	5.0	6.0	1.6	1.5
Goat FYM	40	9.5	4.5	12.0	2.8	1.8

Notes: The 'standard' phosphate & potash availability figures to the next crop grown from Defra's Fertiliser Manual are 60% & 90% respectively.

Poultry Manure	Dry Matter (% DM)	Total Nitrogen (Kg N/t)	Total Phosphate (Kg P ₂ O ₅ /t)	Total Potash (Kg K ₂ O/t)	Total Sulphur (Kg SO ₃ /t)	Total Magnesium (Kg MgO/t)
	20	9.4	8.0	8.5	3.0	2.7
	40	19.0	12.0	15.0	5.6	4.3
	60	28.0	17.0	21.0	8.2	5.9
	80	37.0	21.0	27.0	11.0	7.5

Notes: The 'standard' phosphate & potash availability figures to the next crop grown from Defra's Fertiliser Manual are 60% & 90% respectively.

Cattle & Pig Slurries	Dry Matter (% DM)	Total Nitrogen (Kg N/m ³)	Total Phosphate (Kg P ₂ O ₅ /m ³)	Total Potash (Kg K ₂ O/m ³)	Total Sulphur (Kg SO ₃ /m ³)	Total Magnesium (Kg MgO/m ³)
Cattle slurry	6.0	2.6	1.2	2.5	0.7	0.6
Dirty water (from cattle)	0.5	0.5	0.1	1.0	0.1	0.1
Separated cattle slurries						
- strainer box liquid	1.5	1.5	0.3	1.5	ND	ND
- weeping wall liquid	3.0	2.0	0.5	2.3	ND	ND
- mechanically separated liquid	4.0	3.0	1.2	2.8	ND	ND
- solid portion after separation	20.0	4.0	2.0	3.3	ND	ND
Pig slurry	4.0	3.6	1.5	2.2	0.7	0.7
Separated pig slurry - liquid	3.0	3.6	1.1	2.0	ND	ND
Separated pig slurry - solid	20.0	5.0	3.7	2.0	ND	ND

Notes: ND = no data.

The 'standard' phosphate & potash availability figures to the next crop grown from Defra's Fertiliser Manual are 50% & 90% respectively (50% & 100% for dirty water).

Biosolids	Dry Matter (% DM)	Total Nitrogen (Kg N/t)	Total Phosphate (Kg P ₂ O ₅ /t)	Total Potash (Kg K ₂ O/t)	Total Sulphur (Kg SO ₃ /t)	Total Magnesium (Kg MgO/t)
Digested cake	25	11.0	11.0	0.6	8.2	1.6
Thermally dried	95	40.0	55.0	2.0	23.0	6.0
Lime stabilised	25	8.5	7.0	0.8	7.4	2.4
Composted	40	11.0	10.0	3.0	6.1	2.0

Notes: The 'standard' phosphate & potash availability figures to the next crop grown from Defra's Fertiliser Manual are 50% & 90% respectively.

Other Organic Manures	Dry Matter (% DM)	Total Nitrogen (Kg N/t)	Total Phosphate (Kg P ₂ O ₅ /t)	Total Potash (Kg K ₂ O/t)	Total Sulphur (Kg SO ₃ /t)	Total Magnesium (Kg MgO/t)
Composts						
Green compost	60	7.5	3.0	6.8	3.4	3.4
Green/food compost	60	11.0	4.9	8.0	5.1	3.4
Mushroom compost	35	6.0	5.0	9.0	ND	ND
Digestates						
Food-based whole	4.1	4.8	1.1	2.4	0.7	0.2
Food-based separated liquor	3.8	4.5	1.0	2.8	1.0	0.2
Food-based separated fibre	27.0	8.9	10.2	3.0	4.0	2.2
Farm-sourced whole	5.5	3.6	1.7	4.0	0.8	0.6
Farm-sourced separated liquor	3.0	1.9	0.6	2.5	<0.1	0.4
Farm-sourced separated fibre	24.0	5.6	4.7	6.0	1.2	1.8
Paper Crumble						
Chemically / physically treated	40	2.0	0.4	0.2	0.6	1.4
Biologically treated	30	7.5	3.8	0.4	2.4	1.0
Water Treatment Cake						
Water treatment cake	25	2.4	3.4	0.4	5.5	0.8
Food industry 'wastes'						
Dairy waste	4	1.0	0.8	0.2	ND	ND
Soft drinks waste	4	0.3	0.2	Trace	ND	ND
Brewing waste	7	2.0	0.8	0.2	ND	ND
General food waste	5	1.6	0.7	0.2	ND	ND

Notes: ND = no data.

The 'standard' figures for the above organic manures have been taken from Defra's Fertiliser Manual 2017 (RB209) 9th edition and the corresponding PLANET version 3 software. Further information on fertiliser recommendations for organic manures can be obtained from the Fertiliser Manual or from a FACTS qualified adviser.

