

# DAIRY PARTNERS, NEWCASTLE EMLYN

## Analysis of Liquid Sludge

Report No: 72745  
Sample No: 160672  
Date: 09/01/2025

Application rate (t/ha)                    80.0  
Application rate (t/acre)                32.4  
pH    5.95  
Dry solids (%)                                5.29

Organic Matter (%)                        4.92

### NUTRIENT CONTENT

	Result	Units	Total		Available	
			(kg/t)	( kg/ha)	(kg/t)	( kg/ha)
Nitrogen (N)	0.24	%	2.4	192	0.5	38
Ammonium-N	110	mg/kg	0.1	9		
Phosphorus (P)	635	mg/kg	0.6	51		
Phosphate (P <sub>2</sub> O <sub>5</sub> )			1.5	116	0.9	70
Potassium (K)	281	mg/kg	0.3	22		
Potash (K <sub>2</sub> O)			0.3	27	0.3	22
Magnesium (Mg)	46.2	mg/kg	0.0	4		
Magnesium (MgO)			0.1	6	0.0	1
Sulphur (S)	155	mg/kg	0.2	12		
Sulphur (SO <sub>3</sub> )			0.4	31	0.1	6

### POTENTIALLY TOXIC ELEMENTS

	Result	Units	Rate		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	1.80	mg/kg	1.80	0.14	15.00
Copper	0.49	mg/kg	0.49	0.04	7.50
Nickel	0.20	mg/kg	0.20	0.02	3.00
Lead	0.50	mg/kg	0.50	0.04	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.23	mg/kg	0.23	0.02	15.00
Mercury	0.05	mg/kg	0.05	0.00	0.10

All results expressed on sample as received. The nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

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DAIRY PARTNERS

DAIRY WASTE

## DAIRY WASTE ANALYSIS RESULTS

Sample Reference :

DAIRY PARTNERS

Sample Matrix : DAIRY WASTE

Laboratory References

Report Number	72745
Sample Number	160672

Date Received	09-JAN-2025
Date Reported	24-FEB-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Oven Dry Solids	5.29	%
E Coli [Fresh]	740	cfu/g
Conductivity 1:6	340	uS/cm
Total Kjeldahl Nitrogen	0.24	% w/w
Nitrate Nitrogen	<10	mg/kg
Ammonium Nitrogen	110	mg/kg
Total Phosphorus (P)	635	mg/kg
Total Potassium (K)	281	mg/kg
Total Magnesium (Mg)	46.2	mg/kg
Total Copper (Cu)	0.49	mg/kg

Released by *Gabrielle Parkes*

Date *24/02/25*

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DAIRY PARTNERS

DAIRY WASTE

## DAIRY WASTE ANALYSIS RESULTS

Sample Reference :

DAIRY PARTNERS

Sample Matrix : DAIRY WASTE

### Laboratory References

Report Number 72745  
Sample Number 160672

Date Received 09-JAN-2025  
Date Reported 24-FEB-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Total Zinc (Zn)	1.80	mg/kg
Total Sulphur (S)	155	mg/kg
Total Calcium (Ca)	183	mg/kg
Total Lead (Pb)	<0.5	mg/kg
Total Cadmium (Cd)	<0.01	mg/kg
Total Mercury (Hg)	<0.05	mg/kg
Total Nickel (Ni)	<0.2	mg/kg
Total Chromium (Cr)	0.23	mg/kg
Total Sodium (Na)	206	mg/kg
pH 1:6 [Fresh]	5.95	

Released by *Gabrielle Parkes*

Date *24/02/25*

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DAIRY PARTNERS

DAIRY WASTE

## DAIRY WASTE ANALYSIS RESULTS

Sample Reference :

DAIRY PARTNERS

Sample Matrix : DAIRY WASTE

### Laboratory References

Report Number	72745
Sample Number	160672

Date Received	09-JAN-2025
Date Reported	24-FEB-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Organic Matter LOI	4.92	% w/w
Coliforms [fresh]	380000	cfu/g
B.O.D. [fresh]	29550	mg/l
C.O.D. [fresh]	85530	mg/kg
Oils, Fats and Grease	17720	mg/kg
Salmonella spp [fresh]	Negative	in 25g
EC [Neat]	2138	uS/cm

Released by ..... *Gabrielle Parkes* .....

Date 24/02/25

# VOLAC/SENSIENT, FELINFACH

## Analysis of Liquid Sludge

Sample Name: Volac / Sensient 1

Report No: 91949

Sample No: 166297

Date: 08/05/2025

Application rate (t/ha) 97.0  
Application rate (t/acre) 39.3  
pH 7.76  
Dry solids (%) 1.81

Organic Matter (%) 0.98

### NUTRIENT CONTENT

	result	units	Total		Available	
			(kg/t)	( kg/ha)	(kg/t)	( kg/ha)
Nitrogen (N)	0.11	%	1.1	107	0.2	21
Ammonium-N	588	mg/kg	0.6	57		
Phosphorus (P)	525	mg/kg	0.5	51		
Phosphate (P <sub>2</sub> O <sub>5</sub> )			1.2	117	0.7	70
Potassium (K)	1061	mg/kg	1.1	103		
Potash (K <sub>2</sub> O)			1.3	124	1.0	99
Magnesium (Mg)	90.9	mg/kg	0.1	9		
Magnesium (MgO)			0.2	15	0.0	1
Sulphur (S)	81	mg/kg	0.1	8		
Sulphur (SO <sub>3</sub> )			0.2	20	0.0	4

### POTENTIALLY TOXIC ELEMENTS

	result	units	Rate		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	1.55	mg/kg	1.55	0.15	15.00
Copper	0.20	mg/kg	0.20	0.02	7.50
Nickel	0.20	mg/kg	0.20	0.02	3.00
Lead	0.50	mg/kg	0.50	0.05	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.23	mg/kg	0.23	0.02	15.00
Mercury	0.05	mg/kg	0.05	0.00	0.10

All results expressed on sample as received. The copper, nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# VOLAC/SENSIENT, FELINFACH

## Analysis of Liquid Sludge

Sample Name: Volac / Sensient 1

Report No: 91949

Sample No: 166297

Date: 08/05/2025

Application rate (t/ha) 131.0  
Application rate (t/acre) 53.0  
pH 7.76  
Dry solids (%) 1.81

Organic Matter (%) 0.98

### NUTRIENT CONTENT

	result	units	Total		Available	
			(kg/t)	( kg/ha)	(kg/t)	( kg/ha)
Nitrogen (N)	0.11	%	1.1	144	0.2	29
Ammonium-N	588	mg/kg	0.6	77		
Phosphorus (P)	525	mg/kg	0.5	69		
Phosphate (P <sub>2</sub> O <sub>5</sub> )			1.2	157	0.7	94
Potassium (K)	1061	mg/kg	1.1	139		
Potash (K <sub>2</sub> O)			1.3	167	1.0	133
Magnesium (Mg)	90.9	mg/kg	0.1	12		
Magnesium (MgO)			0.2	20	0.0	2
Sulphur (S)	81	mg/kg	0.1	11		
Sulphur (SO <sub>3</sub> )			0.2	27	0.0	5

### POTENTIALLY TOXIC ELEMENTS

	result	units	Rate		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	1.55	mg/kg	1.55	0.20	15.00
Copper	0.20	mg/kg	0.20	0.03	7.50
Nickel	0.20	mg/kg	0.20	0.03	3.00
Lead	0.50	mg/kg	0.50	0.07	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.23	mg/kg	0.23	0.03	15.00
Mercury	0.05	mg/kg	0.05	0.01	0.10

All results expressed on sample as received. The copper, nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# VOLAC/SENSIENT, FELINFACH

## Analysis of Liquid Sludge

Sample Name: Volac / Sensient 1

Report No: 91949

Sample No: 166297

Date: 08/05/2025

Application rate (t/ha)                    138.0  
Application rate (t/acre)                55.8  
pH    7.76  
Dry solids (%)                                1.81

Organic Matter (%)                         0.98

### NUTRIENT CONTENT

	result	units	Total		Available	
			(kg/t)	( kg/ha)	(kg/t)	( kg/ha)
Nitrogen (N)	0.11	%	1.1	152	0.2	30
Ammonium-N	588	mg/kg	0.6	81		
Phosphorus (P)	525	mg/kg	0.5	72		
Phosphate (P <sub>2</sub> O <sub>5</sub> )			1.2	166	0.7	100
Potassium (K)	1061	mg/kg	1.1	146		
Potash (K <sub>2</sub> O)			1.3	176	1.0	141
Magnesium (Mg)	90.9	mg/kg	0.1	13		
Magnesium (MgO)			0.2	21	0.0	2
Sulphur (S)	81	mg/kg	0.1	11		
Sulphur (SO <sub>3</sub> )			0.2	28	0.0	6

### POTENTIALLY TOXIC ELEMENTS

	result	units	Rate		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	1.55	mg/kg	1.55	0.21	15.00
Copper	0.20	mg/kg	0.20	0.03	7.50
Nickel	0.20	mg/kg	0.20	0.03	3.00
Lead	0.50	mg/kg	0.50	0.07	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.23	mg/kg	0.23	0.03	15.00
Mercury	0.05	mg/kg	0.05	0.01	0.10

All results expressed on sample as received. The copper, nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# VOLAC/SENSIENT, FELINFACH

## Analysis of Liquid Sludge

Sample Name: Volac / Sensient 1

Report No: 91949

Sample No: 166297

Date: 08/05/2025

Application rate (t/ha)                    140.0  
Application rate (t/acre)                56.7  
pH    7.76  
Dry solids (%)                                1.81

Organic Matter (%)                        0.98

### NUTRIENT CONTENT

	result	units	Total		Available	
			(kg/t)	( kg/ha)	(kg/t)	( kg/ha)
Nitrogen (N)	0.11	%	1.1	154	0.2	31
Ammonium-N	588	mg/kg	0.6	82		
Phosphorus (P)	525	mg/kg	0.5	74		
Phosphate (P <sub>2</sub> O <sub>5</sub> )			1.2	168	0.7	101
Potassium (K)	1061	mg/kg	1.1	149		
Potash (K <sub>2</sub> O)			1.3	178	1.0	143
Magnesium (Mg)	90.9	mg/kg	0.1	13		
Magnesium (MgO)			0.2	21	0.0	2
Sulphur (S)	81	mg/kg	0.1	11		
Sulphur (SO <sub>3</sub> )			0.2	28	0.0	6

### POTENTIALLY TOXIC ELEMENTS

	result	units	Rate		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	1.55	mg/kg	1.55	0.22	15.00
Copper	0.20	mg/kg	0.20	0.03	7.50
Nickel	0.20	mg/kg	0.20	0.03	3.00
Lead	0.50	mg/kg	0.50	0.07	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.23	mg/kg	0.23	0.03	15.00
Mercury	0.05	mg/kg	0.05	0.01	0.10

All results expressed on sample as received. The copper, nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

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LIQUID WASTE

## SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

VOLAC/SENSIENT 1

Sample Matrix : SLURRY/SLUDGE

Laboratory References

Report Number 91949  
Sample Number 166297

Date Received 08-MAY-2025  
Date Reported 13-JUN-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Oven Dry Solids	1.81	%
E Coli [Fresh]	310	cfu/g
Conductivity 1:6	1917	uS/cm
Total Kjeldahl Nitrogen	0.11	% w/w
Nitrate Nitrogen	<10	mg/kg
Ammonium Nitrogen	588	mg/kg
Total Phosphorus (P)	525	mg/kg
Total Potassium (K)	1061	mg/kg
Total Magnesium (Mg)	90.9	mg/kg
Total Copper (Cu)	<0.2	mg/kg

Released by *Karen Mitchell*

Date *13/06/25*

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LIQUID WASTE

## SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

VOLAC/SENSIENT 1

Sample Matrix : SLURRY/SLUDGE

Laboratory References

Report Number	91949
Sample Number	166297

Date Received	08-MAY-2025
Date Reported	13-JUN-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Total Zinc (Zn)	1.55	mg/kg
Total Sulphur (S)	81.0	mg/kg
Total Calcium (Ca)	601	mg/kg
Total Lead (Pb)	<0.5	mg/kg
Total Cadmium (Cd)	<0.01	mg/kg
Total Mercury (Hg)	<0.05	mg/kg
Total Nickel (Ni)	<0.2	mg/kg
Total Chromium (Cr)	0.23	mg/kg
Total Sodium (Na)	725	mg/kg
pH 1:6 [Fresh]	7.76	

Released by *Karen Mitchell*

Date *13/06/25*

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LIQUID WASTE

## SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

VOLAC/SENSIENT 1

Sample Matrix : SLURRY/SLUDGE

Laboratory References

Report Number 91949  
Sample Number 166297

Date Received 08-MAY-2025  
Date Reported 13-JUN-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Organic Matter LOI	0.98	% w/w
Coliforms [fresh]	250000	cfu/g
B.O.D. [fresh]	8650	mg/l
C.O.D. [fresh]	18060	mg/kg
Oils,Fats and Grease	1099	mg/kg
Salmonella spp [fresh]	Negative	in 25g
EC [Neat]	9572	uS/cm

Released by *Karen Mitchell*

Date *13/06/25*

# FIRST MILK, HAVERFORDWEST

## Analysis of Liquid Sludge

Sample Name: Aqua Thin Sludge

Report No: 79190

Sample No: 162728

Date: 17/02/2025

Application rate (t/ha)                    100.0  
Application rate (t/acre)                40.5  
pH    6.76  
Dry solids (%)                                2.41

Organic Matter (%)                        1.97

### NUTRIENT CONTENT

	result	units	Total		Available	
			(kg/t)	( kg/ha)	(kg/t)	( kg/ha)
Nitrogen (N)	0.19	%	1.9	190	0.4	38
Ammonium-N	53.4	mg/kg	0.1	5		
Phosphorus (P)	418	mg/kg	0.4	42		
Phosphate (P <sub>2</sub> O <sub>5</sub> )			1.0	96	0.6	57
Potassium (K)	193	mg/kg	0.2	19		
Potash (K <sub>2</sub> O)			0.2	23	0.2	19
Magnesium (Mg)	25.8	mg/kg	0.0	3		
Magnesium (MgO)			0.0	4	0.0	0
Sulphur (S)	118	mg/kg	0.1	12		
Sulphur (SO <sub>3</sub> )			0.3	30	0.1	6

### POTENTIALLY TOXIC ELEMENTS

	result	units	Rate		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	1.40	mg/kg	1.40	0.14	15.00
Copper	0.20	mg/kg	0.20	0.02	7.50
Nickel	0.20	mg/kg	0.20	0.02	3.00
Lead	0.50	mg/kg	0.50	0.05	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.29	mg/kg	0.29	0.03	15.00
Mercury	0.05	mg/kg	0.05	0.01	0.10

All results expressed on sample as received. The copper, nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

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AQUA OPERATIONS  
FIRST MILK  
  
THIN SLUDGE

## THIN SLUDGE ANALYSIS

Sample Reference :

AQUA THIN SLUDGE

Sample Matrix : THIN SLUDGE

Laboratory References

Report Number	79190
Sample Number	162728

Date Received	17-FEB-2025
Date Reported	27-FEB-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Oven Dry Solids	2.41	%
E Coli [Fresh]	20	cfu/g
Conductivity 1:6	649	uS/cm
Total Kjeldahl Nitrogen	0.19	% w/w
Nitrate Nitrogen	<10	mg/kg
Ammonium Nitrogen	53.4	mg/kg
Total Phosphorus (P)	418	mg/kg
Total Potassium (K)	193	mg/kg
Total Magnesium (Mg)	25.8	mg/kg
Total Copper (Cu)	<0.2	mg/kg

Released by *Teresa Clyne*

Date *27/02/25*

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AQUA OPERATIONS  
FIRST MILK  
  
THIN SLUDGE

## THIN SLUDGE ANALYSIS

Sample Reference :

AQUA THIN SLUDGE

Sample Matrix : THIN SLUDGE

Laboratory References

Report Number	79190
Sample Number	162728

Date Received	17-FEB-2025
Date Reported	27-FEB-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Total Zinc (Zn)	1.40	mg/kg
Total Sulphur (S)	118	mg/kg
Total Calcium (Ca)	293	mg/kg
Total Lead (Pb)	<0.5	mg/kg
Total Cadmium (Cd)	<0.01	mg/kg
Total Mercury (Hg)	<0.05	mg/kg
Total Nickel (Ni)	<0.2	mg/kg
Total Chromium (Cr)	0.29	mg/kg
Total Sodium (Na)	387	mg/kg
pH 1:6 [Fresh]	6.76	

Released by *Teresa Clyne*

Date *27/02/25*

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AQUA OPERATIONS  
FIRST MILK  
  
THIN SLUDGE

## THIN SLUDGE ANALYSIS

Sample Reference :

AQUA THIN SLUDGE

Sample Matrix : THIN SLUDGE

### Laboratory References

Report Number	79190
Sample Number	162728

Date Received	17-FEB-2025
Date Reported	27-FEB-2025

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

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

### ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Organic Matter LOI	1.97	% w/w
Coliforms [fresh]	32000	cfu/g
B.O.D. [fresh]	12200	mg/l
C.O.D. [fresh]	26790	mg/kg
Oils,Fats and Grease	1820	mg/kg
Salmonella spp [fresh]	Negative	in 25g
EC [Neat]	2137	uS/cm

Released by *Teresa Clyne*

Date *27/02/25*