

National Accreditation Board for Testing and Calibration Laboratories

NABL

Department of Science & Technology, India

#### **CERTIFICATE OF ACCREDITATION**

### **CENTRE FOR ANALYSIS AND LEARNING IN LIVESTOCK AND FOOD**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

National Dairy Development Board, Anand, Gujarat in the discipline of CHEMICAL TESTING

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number T-2678

**Issue Date** 

14/10/2013



Valid Until

13/10/2015

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

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N. Venkateswaran

Dr T Ramasami

Anil Relia Director

Chairman





Department of Science & Technology, India

**SCOPE OF ACCREDITATION** 

Laboratory	Centre for Analysis and Learning in Livestock and Food, National Dairy Development Board, Anand, Gujarat			
Accreditation Standard	ISO/IEC 17025:2005			
Discipline	Chemical Testing	Issue Date	14.10.2013	
Certificate Number	T-2678	Valid Until	13.10.2015	
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S.No. Product / Specific Test Test Method Specification Range
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#### I. FOOD & AGRICULTURAL PRODUCTS

1 (a)	) Milk and Dairy Products (Nutritional / Compositional)		r"	
i	Cheese	Fat	IS 2785: 1979 (Appendix B)	1.5 to 65 %
		Salt as NaCl	IS 11763:2005	0.5 to 4 %
	5	Total Solid	IS 2785:1979 (Appendix A)	20 to 95 %
		Moisture	IS 2785:1979 (Appendix A)	10 to 80 %
ii	Milk Powder	Fat	IS 11721:2005	1 to 40 %
		Titratable Acidity (as lactic acid)	IS 1165: 2002 (Annex B)	0.5 to 3 %
		Moisture	IS 11623: 986 IS 16072: 2012	1 to 8 % 1 to 8 %
	•	Total Ash	IS 1165:2002 (Annex A)	0.5 to 15 %
		Lactose	ISO-22662:2007	0.5 to 50 %
		Insolubility Index	IS 12759:1989	0.1 to 3 ml
	3	Protein	AOAC 991.21 18 <sup>th</sup> Edn.	10 to 40 %
		Total Solid	IS 11623:1986	92 to 99 %
		Total Solid	IS 16072:2012	92 to 99 %



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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
iii.	Paneer	Fat	IS 10484:1983 (Appendix B)	4 to 70 %
		Protein	AOAC 991.23, 18 <sup>th</sup> Edn.	5 to 40 %
<b>3</b> 1		Total Solid	IS 10484:1983 (Appendix A)	20 to 90 %
	,	Moisture	IS 10484:1983 (Appendix A)	10 to 80 %
iv.	Raw Milk	Protein	AOAC 991.20, 18 <sup>th</sup> Edn.	2 to 6 %
		pH	IS: 1479 (Part II):1961	5 to 9
v.	Shrikhand	Fat	IS 1166:1986	1 to 15 %
	Protein	AOAC 991.22, 18 <sup>th</sup> Edn.	2 to 20 %	
		Titratable Acidity (as lactic acid)	IS 1166:1986 (Appendix D)	0.5 to 3 %
	*	Total Solid	IS 1166: 1986 (Appendix B)	30 to 70 %
		Moisture	IS 1166: 1986 (Appendix B)	20 to 60 %
		Total Ash	IS 14433: 2007	0.3 to 2 %
		Sugar (Sucrose)	IS 9532: 1980	20 to 80 %
vi.	Skim Milk	Lactose	ISO : 22662: 2007	0.5 to 50 %
	Powder	Total Solid	IS 11623: 1986	92 to 99 %
		Total Solid	IS 16072: 2012	92 to 99 %
		Fat	IS 11721:2005	0.75 to 2.5 %

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		Titratable Acidity (as lactic acid)	IS 11766: 1986	0.5 to 3 %
		Moisture	IS 11623:1986	1 to 8 %
		Moisture	IS 16072:2012	1 to 8 %
		Total Ash	IS 14433: 1997 (Part 1) (Annex B)	0.5 to 15 %
		Scorched particles	IS 13500:1992	7.5 to 32.5 mg
	,	Insolubility Index	IS 12759: 1989	0.1 to 3 ml
	i.	Protein	AOAC 991.21, 18 <sup>th</sup> Edn.	20 to 40 %
ii.	Infant Food	Vitamin C	AOAC 985.33, 18 <sup>th</sup> Edn.	40 to 400 mg/100 g
(b)	Milk and Dairy ( Residues & Co			
	Milk Powder/Skim Milk Powder	Melamine	CALF/SOP/CHEM/CCR/15- (Issue date:16/10/2012)	1 to 10 mg/kg
	Raw Milk	Arsenic	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	50 to 500 µg/kg
		Cadmium	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	50 to 500 μg/kg
		Cadmium Lead		50 to 500 μg/kg 10 to 100 μg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	÷	Total Residual Antibiotics	CALF/SOP/CHEM/CCR/07- (Issue date:17/12/2009)	4 μg/kg
		Ivermectin	CALF/SOP/CHEM/CCR/01- (Issue date:03/07/2013)	5 to 50 μg/kg
		Albendazole	CALF/SOP/CHEM/CCR/16- (Issue date:18/06/2013)	50 to 300 μg/kg
		Fenbendazole	CALF/SOP/CHEM/CCR/16 – (Issue date:18/06/2013)	50 to 300 µg/kg
2 (a)	Animal Feeds (P	roximate)		
	Compounded	Moisture	IS 7874 Part I: 1975	1 to 20 %
	Feed and Feed Ingredients	Crude protein	IS/ISO 5983 Part 2 :2005	1 to 60 %
	®	Crude fiber	EC No. 152/2009; I of Annex III	1.5 to 50 %
	*	Crude Fat	EC No. 152/2009; H of Annex III	1 to 30 %
		Total ash	EC No 152/2009 M of Annex III	0.5 to 20 %
		Acid Insoluble Ash	IS 7874 Part I: 1975	0.5 to 20 %
			EC No 152/2009 N of Annex III	0.5 to 20 %
		Urea	IS 14832: 2000	0.5 to 2 %
		Available Phosphorus	IS 1374: 1992 Appendix C with ICP-OES	0.2 to 2 %
		Vitamin A (as retinol)	IS 15120: 2002	1000 to 25000 IU/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Vitamin D3	IS 2052: 2009	1000 to 20000 IU /kg
		Vitamin E	EN 2000/45/EC	5 to 100 IU/kg
		Salt as NaCl	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.2 to 3 %
		Calcium	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.3 to 2 %
¥1		Phosphorus	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.3 to 2 %
		Copper	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	5 to 200 mg/kg
		Iron	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	75 to 500 mg/kg
	*	Magnesium	CALF/SOP/CHEM/MMS/06 – (Issue date:02/07/2013)	50 to 1000 mg/kg
		Manganese	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	10 to 200 mg/Kg
,		Sodium	CALF/SOP/CHEM/MMS/06 (Issue date:02/07/2013)	500 to 20,000 mg/kg
		Sulphur	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	400 to 4000 mg/kg
		Zinc	CALF/SOP/CHEM/MMS/06 – (Issue date:02/07/2013)	20 to 200 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
ii.	Mineral	Moisture	IS 5470: 2002 (Annex A)	0.5 to 10%
	Mixture	Silica / Acid Insoluble Ash	IS 7874 Part 1: 1975	0.5 to 10%
		Total Ash	IS 5470: 2002 (Annex C)	60 to 95%
		Calcium	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	10 to 30 %
		Cobalt	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.006 to 0.03 %
ς.		Copper	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.05 to 0.5 %
		Iron	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.05 to 1 %
		Magnesium	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	2.5 to 10 %
		Manganese	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.05 to 0.5 %
,	-	Phosphorus	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	5 to 25 %
		Sulphur	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.4 to 8 %
		Zinc	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.2 to 2 %

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Laboratory			Centre for Analysis and Learning in Livestock and Food, National Dairy Development Board, Anand, Gujarat			
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed		ge of Testing / its of Detection	

iii.	Vitamins pre- mix/feed	Vitamin A (as retinol)	AOAC 2001.13, 18 <sup>th</sup> Edn.	100000 to 1400000 IU/gm
	supplements			300 to 2500 TU/gm
		Vitamin D3	AOAC 979.24, 18 <sup>th</sup> Edn.	25000 to 300000 IU/g
		Vitamin E	EN 2000/45/EC	50 to 2500 mg/kg
2 (b)	Animal Feed ( Re	sidues & Contaminants)		
i.	Compounded Cattle Feed and Feed	Selenium	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	2 to 20 mg/kg
20	Ingredients	Arsenic	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	1 to 10 mg/kg
		Cadmium	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	1 to 10 mg/kg
	•	Lead	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	1 to 10 mg/kg
		Mercury	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	1 to 10 mg/kg
		Tin	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	1 to 10 mg/kg
ii.	Mineral Mixture	Arsenic (as As <sub>2</sub> O <sub>3</sub> )	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	3 to 30 mg/kg
		Lead	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	10 to 50 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed
3.	Mycotoxins in Fo	ood and Feed
i.	Milk Powder/ Skim milk powder	Aflatoxin M1
ii.	Animal Feed	Aflatoxin B1
II.	WATER	
i.	Water for Processed food Industry	Total dissolved solids pH Total Hardness (as CaCO <sub>3</sub> ) Alkalinity Aluminium Arsenic Cadmium Calcium
		Chloride Copper

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Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
CALF/SOP/CHEM/CCR/09 – Issue date:17/12/2009	0.2 to 8 µg/kg
CALF/SOP/CHEM/CCR/13- Issue date:20/04/2010	5 to 100 μg/ kg
	· · ·
IS 3025: 1964	100 to 1200 mg/L
IS 3025: 1964	5 to 10
IS 3025: Part A : 1964	10 to 1000 mg/L
IS 3025:1964	30- 600 mg/L
CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	0.02 to 0.3 mg/L
CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	0.1 to 0.5 mg/L
CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	0.005 to 0.05 mg/L
CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	1 to 400 mg/L
IS 3025: Part 32: 1988	100 to 500 mg/L
CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.05 to 3 mg/L
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Fluoride	CALF/SOP/CHEM/MMS/05 (Issue date:02/07/2013)	0.5 to 3 mg/L
		Iron	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.1 to 3 mg/L
		Lead	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	0.05 to 0.2 mg/L
	. · .	Magnesium	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	10 to 300 mg/L
	•••	Manganese	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.05 to 0.5 mg/L
		Mercury	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	0.0005 to 0.05 mg/L
	,	Selenium	CALF/SOP/CHEM/MMS/07- (Issue date:02/07/2013)	0.003 to 0.1 mg/L
		Sodium	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	10 to 200 mg/L
		Zinc	CALF/SOP/CHEM/MMS/06- (Issue date:02/07/2013)	0.5 to 30 mg/ L

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