

**Re: IS 4307 : 1983 reg SPECIFICATION FOR FISH MEAL AS POULTRY FEED INGREDIENT****From :** BNBO BNBO <bnbo@bis.gov.in>

Tue, Jan 11, 2022 10:55 PM

**Subject :** Re: IS 4307 : 1983 reg SPECIFICATION FOR FISH MEAL AS POULTRY FEED INGREDIENT**To :** rajeshnair@nddb.coop

Sir

Thank you so much for giving your valuable comments. Will forward the same to the committee.

सादर / Regards,

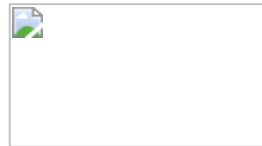
Prem Sajani  
Scientist-D .

....  
**भारतीय मानक ब्यूरो / Bureau of Indian Standards**  
 उपभोक्ता मामले, खाद्य और सार्वजनिक वितरण मंत्रालय, भारत सरकार के अंतर्गत /  
**Under Ministry of Consumer Affairs, Food and Public Distribution, Government of India**

पीन्या इंडस्ट्रियल एरिया, 1 स्टेज, बेंगलुरु - तुमकुर रोड, बेंगलुरु 560 058

Peenya Industrial Area, 1st Stage, Bengaluru - Tumkur Road, Bengaluru 560 058

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**From:** rajeshnair@nddb.coop**To:** "FAD 5, Bureau of Indian Standards" <fad5@bis.gov.in>, "BNBO BNBO" <bnbo@bis.gov.in>**Cc:** rchawla@nddb.coop, guptask@nddb.coop**Sent:** Saturday, January 8, 2022 9:20:04 AM**Subject:** FW: IS 4307 : 1983 reg SPECIFICATION FOR FISH MEAL AS POULTRY FEED INGREDIENT

Dear Sir/Madam,


We propose to include latest test methods for the testing of fish meal as per below table.

Parameter	Existing method	Proposed method	Rationale
Moisture %, Max	4 of IS 7874 (Part 1)	-	NA
Crude protein %, Min	5 of IS 7874 (Part 1)	IS/ISO 5983-Part 1 and Part 2	In IS/ISO 5983 method steps are clear and explained in detail. It also includes results of inelaboratory test and quality control criteria.
Crude fat %,Min	7 of IS 7874 (Part 1)	IS 6492	In IS 6492 method steps are clear and explained in detail. It also includes results of inelaboratory test and quality control criteria.
Acid Insoluble Ash %, Max	10 of IS 7874 (Part 1)	Annex A of IS 1712 based on Appendix XVI Method of feed analysis, FAO or ISO 5985	FAO method is simple for routine analysis.

Chlorine ( as NaCl) % Max  Salt as (NaCl based on Na or chloride ion concentration) %, Max	4 of IS 7874 (Part 2)	BS EN 15621 by ICP-OES	Existing method is a titrimetric method in which accuracy is often an issue.  ICP-OES is multielement technique which can analyze sodium along with many other mineral elements simultaneously.  Name of parameter may also be revised.
---	-----------------------	------------------------	---

डॉ. राजेश आर नायर / Dr. Rajesh R Nair,  
निदेशक, (काफ)/ Director, (CALF)  
राष्ट्रीय डेयरी विकास बोर्ड/ National Dairy Development Board  
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फोन/ Phone: (एलएल/LL) 02962-226311, (एम/एम) 7574835057

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**From:** BNBO BNBO <[bnbo@bis.gov.in](mailto:bnbo@bis.gov.in)>

**Date:** 4 December 2021 at 2:18:21 PM IST

**To:** [rks\\_virology@refiifmail.com](mailto:rks_virology@refiifmail.com), [drakr2005@gmail.com](mailto:drakr2005@gmail.com), [animalwelfareboard@gmail.com](mailto:animalwelfareboard@gmail.com), [assistantsecretaryawbi2018@gmail.com](mailto:assistantsecretaryawbi2018@gmail.com), [debalinamitravet@gmail.com](mailto:debalinamitravet@gmail.com), [kallahalli.umesh@effem.com](mailto:kallahalli.umesh@effem.com), [aiipfm@yahoo.co.in](mailto:aiipfm@yahoo.co.in), [dsucdri@rediffmail.com](mailto:dsucdri@rediffmail.com), "Dhananjay Hansda Scientist, CDRI, PAID" <[d\\_hansda@cdri.res.in](mailto:d_hansda@cdri.res.in)>, [k\\_amit@cseindia.org](mailto:k_amit@cseindia.org), Rajesh Nair <[rajeshnair@nddb.coop](mailto:rajeshnair@nddb.coop)>, Rajiv Chawla <[rchawla@nddb.coop](mailto:rchawla@nddb.coop)>, [drskshakyal@yahoo.co.in](mailto:drskshakyal@yahoo.co.in), [drmanoj.ann@gmail.com](mailto:drmanoj.ann@gmail.com), [ed@clfma.org](mailto:ed@clfma.org), [suresh@bombayampoules.com](mailto:suresh@bombayampoules.com), [banger.rajiv@gmail.com](mailto:banger.rajiv@gmail.com), [dg.and@hry.nic.in](mailto:dg.and@hry.nic.in), [sirjana@fiapo.org](mailto:sirjana@fiapo.org), [varnika@fiapo.org](mailto:varnika@fiapo.org), [abiramibalaji04@gmail.com](mailto:abiramibalaji04@gmail.com), [manpreet.fssai@gmail.com](mailto:manpreet.fssai@gmail.com), [jaspalsinghgadvasu@rediffmail.com](mailto:jaspalsinghgadvasu@rediffmail.com), [sachdeva\\_jasmine@rediffmail.com](mailto:sachdeva_jasmine@rediffmail.com), [rnh65@gmail.com](mailto:rnh65@gmail.com), [svramarao1@gmail.com](mailto:svramarao1@gmail.com), [vermaak62@gmail.com](mailto:vermaak62@gmail.com), [akpattanaik1@gmail.com](mailto:akpattanaik1@gmail.com), [subratcari@gmail.com](mailto:subratcari@gmail.com), [cari\\_director@rediffmail.com](mailto:cari_director@rediffmail.com), [director.cari@icar.gov.in](mailto:director.cari@icar.gov.in), [aglailer@gmail.com](mailto:aglailer@gmail.com), [avijit.dey@icar.gov.in](mailto:avijit.dey@icar.gov.in), [Randhir.Bhatt@icar.gov.in](mailto:Randhir.Bhatt@icar.gov.in), [sarkarsrobana@gmail.com](mailto:sarkarsrobana@gmail.com), [scmehta64@gmail.com](mailto:scmehta64@gmail.com), [ragha0209@yahoo.com](mailto:ragha0209@yahoo.com), [barman74@gmail.com](mailto:barman74@gmail.com), [santanubanik2000@yahoo.com](mailto:santanubanik2000@yahoo.com), [amrishtyagi1963@yahoo.com](mailto:amrishtyagi1963@yahoo.com), [adgapb@gmail.com](mailto:adgapb@gmail.com), [drpgphalke@hotmail.com](mailto:drpgphalke@hotmail.com), [drpgphalke@gmail.com](mailto:drpgphalke@gmail.com), [tanweer.alam@kemin.com](mailto:tanweer.alam@kemin.com), Sujit Nayak <[Sujit.nayak@nic.in](mailto:Sujit.nayak@nic.in)>, "Dr. H.R.Khanna" <[hansraj.khanna@gov.in](mailto:hansraj.khanna@gov.in)>, [anibencyjacob@gmail.com](mailto:anibencyjacob@gmail.com), V Sridhar <[vsridhar@nddb.coop](mailto:vsridhar@nddb.coop)>, Pankaj L Sherasia <[pankajs@nddb.coop](mailto:pankajs@nddb.coop)>, [drnitinvet@gmail.com](mailto:drnitinvet@gmail.com), [Nitin.Tyagi@icar.gov.in](mailto:Nitin.Tyagi@icar.gov.in), [arensachin@gmail.com](mailto:arensachin@gmail.com), [necc\\_chd@hotmail.com](mailto:necc_chd@hotmail.com), [directornianp@gmail.com](mailto:directornianp@gmail.com), [dtpal@yahoo.co.in](mailto:dtpal@yahoo.co.in),

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**Cc:** "FAD 5, Bureau of Indian Standards" <[fad5@bis.gov.in](mailto:fad5@bis.gov.in)>

**Subject: IS 4307 : 1983 reg**

Dear Sir/Madam,

I am working in Bureau of Indian Standards(BIS),Bengaluru Branch office as Scientist-D.

Formulation of Indian Standards is one of the core activities of BIS.

Concerned technical department have identified few Indian Standards due for review/in need of review.  
As a part of the process, I am reviewing the Standard

**IS 4307: 1983 SPECIFICATION FOR FISH MEAL AS POULTRY FEED INGREDIENT**

As a PRINCIPAL member of our technical committee FAD 5, kindly provide your valuable feedback on the above Indian Standard which will be put up to the committee for incorporation or modification in the existing Standard

Copy of the Indian Standard also enclosed for ready reference.

Thank you for your cooperation

सादर / Regards,

Prem Sajani  
Scientist- D .

....

**भारतीय मानक ब्यूरो / Bureau of Indian Standards**

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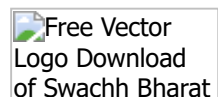
**Under Ministry of Consumer Affairs, Food and Public Distribution, Government of India**

पीन्या इंडस्ट्रियल एरिया, 1 स्टेज, बेंगलुरु - तुमकुर रोड, बेंगलुरु 560 058

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**From :** rajeshnair@nddb.coop

Sat, Jan 08, 2022 09:20 AM

**Subject :** FW: IS 4307 : 1983 reg SPECIFICATION FOR FISH MEAL AS POULTRY FEED INGREDIENT

3 attachments

**To :** FAD 5, Bureau of Indian Standards <[fad5@bis.gov.in](mailto:fad5@bis.gov.in)>, BNBO BNBO <[bnbo@bis.gov.in](mailto:bnbo@bis.gov.in)>

**Cc :** rchawla@nddb.coop, guptask@nddb.coop

Dear Sir/Madam,

We propose to include latest test methods for the testing of fish meal as per below table.

Parameter	Existing method	Proposed method	Rationale
Moisture %, Max	4 of IS 7874 (Part 1)	-	NA
Crude protein %, Min	5 of IS 7874 (Part 1)	IS/ISO 5983-Part 1 and Part 2	In IS/ISO 5983 method steps are clear and explained in detail. It also includes results of inelaboratory test and quality control criteria.
Crude fat %,Min	7 of IS 7874 (Part 1)	IS 6492	In IS 6492 method steps are clear and explained in detail. It also includes results of inelaboratory test and quality control criteria.
Acid Insoluble Ash %, Max	10 of IS 7874 (Part 1)	Annex A of IS 1712 based on Appendix XVI Method of feed analysis, FAO or ISO 5985	FAO method is simple for routine analysis.
Chlorine ( as NaCl) % Max  Salt as (NaCl based on Na or chloride ion concentration) %, Max	4 of IS 7874 (Part 2)	BS EN 15621 by ICP-OES	Existing method is a titrimetric method in which accuracy is often an issue.  ICP-OES is multielement technique which can analyze sodium along with many other mineral elements simultaneously.  Name of parameter may also be revised.

डॉ. राजेश आर नायर / Dr. Rajesh R Nair,  
निदेशक, (काफ)/ Director, (CALF)  
राष्ट्रीय डेयरी विकास बोर्ड/ National Dairy Development Board  
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फोन/ Phone: (एलएल/LL) 02962-226311, (एम/М) 7574835057



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**From:** BNBO BNBO <[bnbo@bis.gov.in](mailto:bnbo@bis.gov.in)>

**Date:** 4 December 2021 at 2:18:21 PM IST

**To:** [rks\\_virology@refiifmail.com](mailto:rks_virology@refiifmail.com), [drakr2005@gmail.com](mailto:drakr2005@gmail.com), [animalwelfareboard@gmail.com](mailto:animalwelfareboard@gmail.com), [assistantsecretaryawbi2018@gmail.com](mailto:assistantsecretaryawbi2018@gmail.com), [debalinamitravet@gmail.com](mailto:debalinamitravet@gmail.com), [kallahalli.umesh@effem.com](mailto:kallahalli.umesh@effem.com), [aiipfm@yahoo.co.in](mailto:aiipfm@yahoo.co.in), [dsucdri@rediffmail.com](mailto:dsucdri@rediffmail.com), "Dhananjay Hansda Scientist, CDRI, PAID" <[d\\_hansda@cdri.res.in](mailto:d_hansda@cdri.res.in)>, [k\\_amit@cseindia.org](mailto:k_amit@cseindia.org), Rajesh Nair <[rajeshnair@nddb.coop](mailto:rajeshnair@nddb.coop)>, Rajiv Chawla <[rchawla@nddb.coop](mailto:rchawla@nddb.coop)>, [drskshakyal@yahoo.co.in](mailto:drskshakyal@yahoo.co.in), [drmanoj.ann@gmail.com](mailto:drmanoj.ann@gmail.com), [ed@clfma.org](mailto:ed@clfma.org), [suresh@bombayampoules.com](mailto:suresh@bombayampoules.com), [banger.rajiv@gmail.com](mailto:banger.rajiv@gmail.com), [dg.and@hry.nic.in](mailto:dg.and@hry.nic.in), [sirjana@fiapo.org](mailto:sirjana@fiapo.org), [varnika@fiapo.org](mailto:varnika@fiapo.org), [abiramibalaji04@gmail.com](mailto:abiramibalaji04@gmail.com), [manpreet.fssai@gmail.com](mailto:manpreet.fssai@gmail.com), [jaspalsinghadvasu@rediffmail.com](mailto:jaspalsinghadvasu@rediffmail.com), [sachdeva\\_jasmine@rediffmail.commail](mailto:sachdeva_jasmine@rediffmail.commail), [rnch65@gmail.com](mailto:rnch65@gmail.com), [svramarao1@gmail.com](mailto:svramarao1@gmail.com), [vermaak62@gmail.com](mailto:vermaak62@gmail.com), [akpattanaik1@gmail.com](mailto:akpattanaik1@gmail.com), [subratcari@gmail.com](mailto:subratcari@gmail.com), [cari\\_director@rediffmail.com](mailto:cari_director@rediffmail.com), [director.cari@icar.gov.in](mailto:director.cari@icar.gov.in), [aglailier@gmail.commail](mailto:aglailier@gmail.commail), [avijit.dey@icar.gov.in](mailto:avijit.dey@icar.gov.in), [Randhir.Bhatt@icar.gov.in](mailto:Randhir.Bhatt@icar.gov.in), [sarkarsrobana@gmail.com](mailto:sarkarsrobana@gmail.com), [scmehta64@gmail.com](mailto:scmehta64@gmail.com), [ragha0209@yahoo.com](mailto:ragha0209@yahoo.com), [barman74@gmail.com](mailto:barman74@gmail.com), [santanubanik2000@yahoo.com](mailto:santanubanik2000@yahoo.com), [amrishtyagi1963@yahoo.com](mailto:amrishtyagi1963@yahoo.com), [adgapb@gmail.com](mailto:adgapb@gmail.com), [drpgphalke@hotmail.com](mailto:drpgphalke@hotmail.com), [drpgphalke@gmail.com](mailto:drpgphalke@gmail.com), [tanweer.alam@kemin.comemail](mailto:tanweer.alam@kemin.comemail), Sujit Nayak <[Sujit.nayak@nic.in](mailto:Sujit.nayak@nic.in)>, "Dr. H.R.Khanna" <[hansraj.khanna@gov.in](mailto:hansraj.khanna@gov.in)>, [anibencyjacob@gmail.com](mailto:anibencyjacob@gmail.com), V Sridhar <[vsridhar@nddb.coop](mailto:vsridhar@nddb.coop)>, Pankaj L Sherasia <[pankajs@nddb.coop](mailto:pankajs@nddb.coop)>, [drnitinvet@gmail.com](mailto:drnitinvet@gmail.com), [Nitin.Tyagi@icar.gov.in](mailto:Nitin.Tyagi@icar.gov.in), [arensachin@gmail.com](mailto:arensachin@gmail.com), [necc\\_chd@hotmail.com](mailto:necc_chd@hotmail.com), [directornianp@gmail.com](mailto:directornianp@gmail.com), [dtpal@yahoo.co.in](mailto:dtpal@yahoo.co.in), [sandeemehta@gmail.com](mailto:sandeemehta@gmail.com), [gargparveen2002@yahoo.com](mailto:gargparveen2002@yahoo.com), [ashok.kapur@narmadagelatines.com](mailto:ashok.kapur@narmadagelatines.com), [virenmirani@indiagelatine.com](mailto:virenmirani@indiagelatine.com), [Manilal74@gmail.com](mailto:Manilal74@gmail.com), [ManilalV@petaindia.orgl](mailto:ManilalV@petaindia.orgl), [gaurimaulekhi@gmail.com](mailto:gaurimaulekhi@gmail.com), [paropkari.shreya@gmail.com](mailto:paropkari.shreya@gmail.com), [natrajana15@gmail.com](mailto:natrajana15@gmail.com), RAJENDRAN R <[rajendran.r@tanuvas.ac.in](mailto:rajendran.r@tanuvas.ac.in)>, [sardana.vijay@gmail.com](mailto:sardana.vijay@gmail.com)

**Cc:** "FAD 5, Bureau of Indian Standards" <[fad5@bis.gov.in](mailto:fad5@bis.gov.in)>

**Subject:** IS 4307 : 1983 reg

Dear Sir/Madam,

I am working in Bureau of Indian Standards(BIS),Bengaluru Branch office as Scientist-D.

Formulation of Indian Standards is one of the core activities of BIS.

Concerned technical department have identified few Indian Standards due for review/in need of review. As a part of the process, I am reviewing the Standard

### **IS 4307: 1983 SPECIFICATION FOR FISH MEAL AS POULTRY FEED INGREDIENT**

As a PRINCIPAL member of our technical committee FAD 5, kindly provide your valuable feedback on the above Indian Standard which will be put up to the committee for incorporation or modification in the existing Standard

Copy of the Indian Standard also enclosed for ready reference.

Thank you for your cooperation

सादर / Regards,

Prem Sajani  
Scientist- D .

....

**भारतीय मानक ब्यूरो / Bureau of Indian Standards**

**उपभोक्ता मामले, खाद्य और सार्वजनिक वितरण मंत्रालय, भारत सरकार के अंतर्गत /**

**Under Ministry of Consumer Affairs, Food and Public Distribution, Government of India**

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Doc. No.: <b>PRTD/AR/PF:03</b>	Issue No.: 2	Issue Date 30 Sept. 2020	<b>Report of Action Research</b>
<b>1.</b>	<b>Action Research Project No. (as assigned by PRTD)</b>		ARP/575
<b>2.</b>	<b>Title of the Action Research Project</b>		Review of IS 4307:1983
<b>3.</b>	<b>Name &amp; Designation of Officer</b>		Prem Sajani Patnala, Scientist-D
<b>4.</b>	<b>Employee No.</b>		063444
<b>5.</b>	<b>Deptt./BO/RO &amp; Place of Posting</b>		BNBO, BANGALORE
<b>6.</b>	<b>Date of Approval of the Project</b>		-
<b>7.</b>	<b>Objective of the Project</b>		Review of IS 4307:1983
<b>8.</b>	<b>Report of Action Research Activities</b>		Attach as per Annexure, as appropriate
<b>9.</b>	<b>Conclusion &amp; Recommendations</b>		IS 4307:1983 may be revised
<b>10.</b>	<b>Any other relevant information</b>		Nil

*Prem Sajani*

(Prem Sajani)

Scientist-D

Head of Deptt./BO

Activity Head

DDG(PRT)

## **TABLE OF CONTENTS**

<b>S.No.</b>	<b>Contents</b>	<b>Page No.</b>
1	Introduction	3
2	Review of Literature	4
3	Methods & Materials, Data, Details of studies & research, other standards etc.	5
4	Recommendations and conclusions	6-9
5	References	10



## **Introduction**

Fish meal is a rich source of high-quality protein and contains, besides calcium and phosphorus, certain growth factors which are necessary for maximum growth rate and hatchability in poultry.

Fish meal suitable for use as livestock feed ingredient is made either by washing, cooking, pressing, drying and pulverizing non-fatty or fatty fresh fish or fish waste. It may also be prepared by heat treating non-fatty, unsalted dry fish to such an extent as would ensure destruction of harmful micro-organisms, followed by pulverizing.

## Review of Literature

Conventional poultry rations usually include many cereals like maize, rice, wheat, oat, barley and a few cereal byproducts such as wheat-bran or rice polish, animal and vegetable protein sources like fish-meal, meat-meal, soybean-oil-meal, groundnut-cake, etc.

Since fish itself is a highly proteinaceous commodity, it is been preferred on behalf of other food stuffs. Similar to fish the fishmeal also imparts proteins of high nutritive value, because of the presence of 22 essential amino acids including the most important amino acid-Lysine, which of course, is rarely present in other feeds/ food stuffs.

### MADE OF:

Fish meal is made from small, pelagic, oceanic fish such as menhaden, herring, anchovies, and sardines. The small fish are pulverized, and the oil and water are pressed out. The remaining solids are cooked and pulverized into a meal. Fishmeal used for animal feed must be stabilized with an antioxidant to preserve its quality. Ethoxyquin is typically added to commercial fishmeal to prevent oxidation, but ethoxyquin cannot be used in organic poultry feed.

### ADVANTAGES:

Fish meal is a good source of minerals, high content of calcium and phosphorus. The selenium content of fish meal is very high, can reach more than 2 mg/kg. High-quality fishmeal normally contains between 60% and 72% crude protein by weight. Typical diets for fish may contain from 32% to 45% total protein by weight. The fishmeal removes the moisture which in turn increases the concentration of proteins available for the growth. The meal is also rich in B-group vitamin namely – Riboflavin, Pantothenic acid, Niacin and Choline. The powdered fishmeal is rich in minerals like Calcium, Phosphorus, Iodine etc. Fishmeal is typically used because it includes digestible crude protein and essential amino acids along with fat, vitamins and minerals. It is often blended with a vegetable protein like rapeseed meal, canola meal or soybean meal.

### DISADVANTAGES

Fish meal is of bad quality, if found with presence of impurities, meal of meat of other animals, nitrogen from urea, sand, etc. A fish meal has a strong and specific smell that is transmitted to milk, eggs and meat. After all, the price of fish meal is too high. The concentrated levels of nitrogen inherit in fish-meal can cause kidney disease and renal failure in chickens. Fish-meal is not a natural fodder-feed for chickens

**Methods & Materials, Data, Details of studies & research, other standards etc.**

**Methods employed:**

An email has been sent to all committee members with a copy to FAD5 on 04 12 2021.

(copy enclosed)

No licensees exist for the above Indian standard.

**Replies received from**

Dr. Rajesh R Nair,  
Director, (CALF)  
National Dairy Development Board  
Anand, Gujarat, India-388001  
Phone: (LL) 02962-226311, (M) 7574835057

Vide his email dated 08 01 2022 (copy enclosed)

**Review of IS 4307 : 1983 (AR/575)**

**1.) Sectional Committee No. & Title:**

FAD (Food and Agriculture Department)

FAD 05 (Animal Husbandry, Feeds and Equipment Sectional Committee)

2.) **IS NO:** IS 4307 : 1983

3) **Title:** SPECIFICATION FOR FISH MEAL AS POULTRY FEED INGREDIENT

4) **Date of Previous Review:** December, 2019

**Review Analysis:**

**5.1) Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.**

1. Standard (No.)	2. Standard (Title)	3. Whether the standard has since been revised	4. Major changes	5. Action proposed
		Standard contains no Cross-Referenced International Standard.		

**5.2) Status of standard referred in the IS.**

1. Referred standards (No.)	2. Referred standards (Title)	3. Since revised IS no. of the corresponding IS	4. Changes in the referred Standards since last review of IS	5. Changes in the referred standard which are affecting the standard under review	6. Action proposed
Salmonella to be tested as per cl.6 of IS 5887:1970	Methods for detection of bacteria responsible for food poisoning: Part 3 general guidance on methods for the detection of salmonella (Second Revision)	IS 5887 (Part 3): 1999 ISO 6579:1993 Reaffirmed In: 2018	IS 5887:1970 copy not available. Hence could not be analyzed.	IS 5887 (Part 3): 1999 ISO 6579:1993 Reaffirmed in 2018 was the newly formulated standard.	Revised IS/ISO standard may be referred

IS 7874 (Part 1) : 1975	Methods of tests for animal feeds and feeding stuffs: Part 1 general methods	IS 7874 (Part 1): 1975 Reaffirmed In: 2019	Nil	Nil	Nil
IS 4905 : 1968	Random sampling and randomization procedures (First Revision)	IS 4905 : 2015 ISO 24153: 2009 Reaffirmed In : 2020			Revised IS/ISO standard reference may be given.

**5.3) Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc or of new or revision of existing Indian Standard).**

1. Standard (No.)	2. Standard (Title)	3. Provisions that could be relevant while reviewing the IS	4. Action proposed
NO INTERNATIONAL/REGIONAL/NATIONAL/ASSOCIATION/CONSORTIA STANDARDS AVAILABLE			

**5.4) Technical comments on the standard received, if any.**

1. Source	2. Clause of IS	3. Comment	4. Action proposed
Dr. Rajesh R Nair, Director, (CALF) National Dairy Development Board Anand, Gujarat, India- 388001 Phone: (LL) 02962- 226311, (M) 7574835057	Sl.no (ii) of Table 1, Clause 2.1 to 3.3.4	Crude protein %, Min- test method prescribed shall be IS/ISO 5983-Part 1 and Part 2 but not limited to only clause 5 of IS 7874 (Part 1)	In IS/ISO 5983 method steps are clear and explained in detail. It also includes results of interlaboratory test and quality control criteria. Hence IS/ISO 5983 test method may be given as reference method.
Dr. Rajesh R Nair, Director, (CALF) National Dairy Development Board Anand, Gujarat, India- 388001 Phone: (LL) 02962- 226311, (M) 7574835057	Sl.no (iii) of Table 1, Clause 2.1 to 3.3.4	Crude fat %, Min is to be tested as per cl. 7 of IS 7874 (Part 1) but IS 6492 method is clearer and detail.	In IS 6492 method steps are clear and explained in detail. It also includes results of interlaboratory test and quality control criteria. Hence IS 6492 test method may be given as reference method.
Dr. Rajesh R Nair, Director, (CALF) National Dairy Development Board Anand, Gujarat, India- 388001 Phone: (LL) 02962- 226311, (M) 7574835057	Sl.no (iv) of Table 1, Clause 2.1 to 3.3.4		Annex A of IS 1712 based on Appendix XVI Method of feed analysis, FAO or ISO 5985. FAO method is simple for routine analysis.

Dr. Rajesh R Nair, Director, (CALF) National Dairy Development Board Anand, Gujarat, India- 388001 Phone: (LL) 02962- 226311, (M) 7574835057	Sl.no (v) of Table 1, Clause 2.1 to 3.3.4	Chlorine ( as NaCl) %  Max Salt as (NaCl based on Na or chloride ion concentration) %, Max 4 of IS 7874 (Part 2)  BS EN 15621 by ICP-OES	Existing method is a titrimetric method in which accuracy is often an issue. ICP-OES is multielement technique which can analyze sodium along with many other mineral elements simultaneously. Name of parameter may also be revised
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### 5.5) Information available on relevant technical developments

1. Source	2. Development	3. Relevant clause of the IS under review that is likely to be impacted (Clause & IS No.)	4. Action proposed
		Nil	

### 6) Issues arising out of changes in any related IS or due to formulation of new Indian Standard.

1. Related IS (revised or new)	2. Related IS Title	3. Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision	4. Changes that may be necessary in the Standards under review	5. Action proposed
		Nil		

### 5.7) Any consequential changes to be considered in other IS.

1. Related IS to get impacted	2. Related IS Title	3. Requirements to be impacted
IS 1374: 2007	Poultry feeds - Specification (Fifth Revision)	ANNEX A (Clause 2) LIST OF REFERRED INDIAN STANDARDS and Cl.B.1.4 of ANNEX B (Clause 4.1.1 ) INGREDIENTS FOR CHICKEN FEEDS
IS 16150: Part 1 : 2014	Fish feed - Specification: Part 1 carp feed	ANNEX A (Clause 2) LIST OF REFERRED INDIAN STANDARDS and Clause B.1.5 (b) of ANNEX B (Clause 4.1.1) INGREDIENTS FOR CARP FEED

IS 16150 : Part 2 : 2014	Fish feed - Specification: Part 2 catfish feed	ANNEX A (Clause 2) LIST OF REFERRED INDIAN STANDARDS and Clause B.1.5 b of ANNEX B (Clause 4.1.1) INGREDIENTS FOR CATFISH FEED
IS 16150 : Part 3 : 2014	Fish feed - Specification: Part 3 marine shrimp feed	ANNEX A (Clause 2) LIST OF REFERRED INDIAN STANDARDS and Clause B 1.1 a of ANNEX B (Clause 4.1.1) INGREDIENTS FOR MARINE SHRIMP FEED
IS 16150 : Part 4 : 2014	Fish feed - Specification: Part 4 Freshwater Prawn (Macrobrachium rosenbergii) Feed	ANNEX A (Clause 2) LIST OF REFERRED INDIAN STANDARDS and Clause B.1.5 b of ANNEX B (Clause 4.1.1) INGREDIENTS FOR FRESHWATER PRAWN FEED
IS 16550 : Part 2 : 2021	Organically produced food products - Part 2, Animal based	Clause 2 REFERENCES and Clause E 2.2 c of ANNEX E ( Clauses 4.9.6 and 4.9.7.1 ) PERMITTED LIST OF FEED MATERIALS, FEED ADDITIVES AND PROCESSING AIDS FOR ANIMAL NUTRITION

**6) Any other observation:**

**7) Upload Supporting Document(s). attached** -email sent to all committee members and reply from National Dairy Development Board attached

**7.1) ARP Report** -attached

**7.2) Draft Document-** enclosed

**8) Recommendations –**

On the basis of the analysis of the info available as mentioned above consideration of sectional committee is solicited on the following aspects of the IS under review:

Based on the detailed study, the following suggestions proposed and may be incorporated in the standard

Clause of IS	Action proposed
Sl.no (ii) of Table 1, Clause 2.1 to 3.3.4	For testing crude protein%, IS/ISO 5983 method may be given as reference method.
Sl.no (iii) of Table 1, Clause 2.1 to 3.3.4	For testing crude fat, IS 6492 test method may be given as reference method.
Sl.no (iv) of Table 1, Clause 2.1 to 3.3.4	For testing Acid Insoluble Ash %, FAO or ISO 5985 may be referred test method instead of Annex 10 of IS 7874 (Part 1), as it is simple for routine analysis.
Sl.no (v) of Table 1, Clause 2.1 to 3.3.4	Existing method for estimating Chlorine (as NaCl) is a titrimetric method in which accuracy is often an issue. ICP-OES (BS EN 15621 by ICP-OES) is multielement technique which can analyze sodium along with many other mineral elements simultaneously.

Name of parameter (Salt as (NaCl based on Na or chloride ion concentration) %, ) may also be revised
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## References:

- <https://www.iffco.com/node/338>
- Ashbrook, F. G. (1917). Fishmeal as a feed for swine. U.S. Dept. of Agriculture, Bull. No.6, 10pp.
- Beski, S. S. M., Swick, R. A., & Iji, P. A. (2015). Specialized protein products in broiler chicken nutrition: A review. *Animal Nutrition*, 1(2), 47–53.  
<http://doi.org/10.1016/j.aninu.2015.05.005>
- Evaluating the Effect of replacing fish meal in broiler diets with either Soybean meal or poultry by-product Meal on Broiler Performance and total feed cost per kilogram of gain Nana S. Frempong, Thomas N. N. Nortey,1 Chad Paulk, and Charles R. Stark Department of Grain Science and Industry, College of Agriculture, Kansas State University, 66502 Manhattan, KS, USA and Department of Animal Science, College of Basic and Applied Sciences, University of Ghana, GA-489-3566, Accra, LG, Ghana
- <https://www.allaboutfeed.net/all-about/new-proteins/the-value-of-fish-silage-for-broilers/>