

**BS ISO 16541:2015**



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# **Methods for sea lice surveillance on marine finfish farms**

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**National foreword**

This British Standard is the UK implementation of ISO 16541:2015.

The UK participation in its preparation was entrusted to Technical Committee AW/234, Fisheries and Aquaculture.

A list of organizations represented on this committee can be obtained on request to its secretary.

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## Methods for sea lice surveillance on marine finfish farms

*Méthodes de surveillance des poux de mer dans les exploitations de  
pisciculture marine*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 234, *Fisheries and aquaculture*.

## Introduction

The term “sea lice” refers to several species of naturally occurring marine copepods that parasitize fish. They attach themselves to the skin, fins, and gills of wild and farmed fish, and feed on host mucus and skin. If an infestation is severe, it can negatively impact the health of affected fish.

The abundance of sea lice can be amplified on marine finfish farms and a concern is that farms can then act as a reservoir, releasing lice back into the broader marine environment. Farms could thus act as a source of infestation for wild fish, particularly salmonids. While it is possible to control lice levels on farms through integrated pest management approaches and the use of therapeutants, the same intervention cannot easily be applied to wild fish populations. For this reason, many jurisdictions place requirements on farmed salmon producers to carefully monitor lice levels on farms and to take appropriate actions to reduce on-farm lice populations where lice have been identified as a concern.

Where sea lice are identified as a concern to be managed, counts may be used in a number of ways. Over the past decade, it has become increasingly common for regulators to establish upper limits to abundance of lice on farms with the intent of minimizing potential impacts to wild fish populations. Farming companies can also monitor lice abundance to maintain appropriate fish welfare conditions. In addition, the development of reduced sensitivity to in-feed medication (following similar trends seen for bath treatments in the 1990s), is a concern to both regulators and producers. Clear and standardized sea lice counts are necessary for the early detection of any such trends. Both the aquaculture industry and pharmaceutical suppliers of ecto-parasiticides would then be in a position to make better and earlier determination of situations in which treatments were beginning to lose effectiveness, and thus, to initiate appropriate mitigation strategies.

Over the past two decades, a range of counting methods have been developed across countries, and sometimes within countries, such that it is often difficult to know how to interpret the sea lice levels reported from farm sites. The goals of this International Standard are to ensure that the sea lice counts carried out on marine finfish farms are accurate and fit for purpose and to establish a method for sea lice on-farm surveillance that can be carried out in any farming area, affording accurate, consistent estimates of lice. A standardized methodology will yield results that can better be compared across jurisdictions and geographic regions, supporting the development and implementation of effective lice management approaches and increasing public confidence that effective control measures are being implemented.

This International Standard has been developed in consideration of the

- intended use of the results of sampling,
- practical and economic constraints of sampling,
- species of lice of concern in an area,
- cage and site configurations,
- seasonal or environmental conditions, and
- potential impacts on fish health and welfare.

