

NSF International Standard / American National Standard

NSF/ANSI 53 - 2013

Addendum

Drinking Water Treatment Units - Health Effects









NSF International, an independent, notfor-profit, non-governmental organization, is dedicated to being the leading global provider of public health and safety-based risk management solutions while serving the interests of all stakeholders.

This Standard is subject to revision.

Contact NSF to confirm this revision is current.

Users of this Standard may request clarifications and interpretations, or propose revisions by contacting:

Chair, Joint Committee on Drinking Water Treatment Units c/o NSF International
789 North Dixboro Road, P. O. Box 130140
Ann Arbor, MI 48113-0140, USA
Phone: (734) 769-8010 Telex: 753215 NSF INTL
FAX: (734) 769-0109
E-mail: info@nsf.org

Web: http://www.nsf.org

This is a preview of "NSF/ANSI 53-2013 Add...". Click here to purchase the full version from the ANSI store.

NSF/ANSI 53 - 2013 - Addendum

NSF International Standard/ American National Standard for Drinking Water Treatment Units —

Drinking water treatment units – Health effects

Standard Developer **NSF International** 

**NSF International Board of Directors** 

**Designated as an ANSI Standard** February 16, 2014

**American National Standards Institute** 

## Prepared by

## The NSF Joint Committee on Drinking Water Treatment Units

Recommended for adoption by

The NSF Council of Public Health Consultants

Adopted by

The NSF Board of Directors

December 1981

Revised June 1982 Revised June 1988 Revised May 1990 Revised November 1992 Revised September 1993 Revised March 1994 Revised March 1996 Revised September 1996

Revised September 1997 Revised November 1998 Revised March 1999

Revised September 1999 Revised May 2000 Revised November 2000 Revised January 2001 Revised January 2002

Addendum 2.0 – 2002, October 2002 Addendum 1.0 – 2002, June 2002 Editorial Revision – November 2003

Revised July 2004

Addendum 1.0 – 2002e, August 2004

Revised February 2005 Revised January 2006

Addendum 1.0 -2006, March 2006

Revised February 2007 Revised July 2007

Addendum 1.0 - 2007, March 2008

Revised August 2009 Revised August 2010 Revised April 2011 Revised April 2012 Revised December 2012 Revised December 2013

Addendum 1.0 - 2014, August 2014

## Published by

**NSF** International

P.O. Box 130140, Ann Arbor, Michigan 48113-0140, USA

For ordering copies or for making inquiries with regard to this Standard, please reference the designation "NSF/ANSI 53 – 2013 - Addendum."

Copyright 2014 NSF International

Previous editions © 2013, 2012, 2011, 2009, 2008. 2007, 2006, 2005, 2004, 2002, 2001, 2000, 1998, 1997, 1996, 1994, 1993, 1992, 1990, 1988, 1982, 1981

Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from NSF International.

Printed in the United States of America.

## Disclaimers<sup>1</sup>

NSF, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. The opinions and findings of NSF represent its professional judgment. NSF shall not be responsible to anyone for the use of or reliance upon this Standard by anyone. NSF shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Standard.

NSF Standards provide basic criteria to promote sanitation and protection of the public health. Provisions for mechanical and electrical safety have not been included in this Standard because governmental agencies or other national standards-setting organizations provide safety requirements.

Participation in NSF Standards development activities by regulatory agency representatives (federal, local, state) shall not constitute their agency's endorsement of NSF or any of its Standards.

Preference is given to the use of performance criteria measurable by examination or testing in NSF Standards development when such performance criteria may reasonably be used in lieu of design, materials, or construction criteria.

The illustrations, if provided, are intended to assist in understanding their adjacent standard requirements. However, the illustrations may not include **all** requirements for a specific product or unit, nor do they show the only method of fabricating such arrangements. Such partial drawings shall not be used to justify improper or incomplete design and construction.

Unless otherwise referenced, the annexes are not considered an integral part of NSF Standards. The annexes are provided as general guidelines to the manufacturer, regulatory agency, user, or certifying organization.

.

<sup>&</sup>lt;sup>1</sup> The information contained in this Disclaimer is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. Therefore, this Disclaimer may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	
This page is intentionally left blank.	

This is a preview of "NSF/ANSI 53-2013 Add...". Click here to purchase the full version from the ANSI store.

This is a preview of "NSF/ANSI 53-2013 Add...". Click here to purchase the full version from the ANSI store.

# Contents

1	General	1
	1.1 Purpose	1
	1.2 Scope	1
	1.2 Scope	1
	-	
6	Minimum performance requirements	1
	Minimum performance requirements	1
	, ,	
An	nex A	
An	nex B	3

This is a preview of "NSF/ANSI 53-2013 Add". Click here	e to purchase the full version from the ANSI store.
This page is intentional	ly left blank.

## Foreword<sup>2</sup>

The purpose of this Standard is to establish minimum requirements for materials, design and construction, and performance of drinking water treatment systems that are designed to reduce specific health-related contaminants in public or private water supplies. NSF/ANSI 53 specifies minimum product literature requirements that manufacturers must provide to authorized representatives and owners.

This edition of the Standard contains the following revisions:

## Issue 94

The revision corrects an error recently found in NSF/ANSI 53. When the standard was reformatted several years ago, section 1.3 – Alternate materials, designs, and construction was mistakenly omitted (it is currently still listed in NSF/ANSI 42). This language has been reinserted to its previous location under section 1.

#### Issue 95

The revision allows for a shorter cycle time for performance indication devices (PID) during the flow test method under section 6.

#### Issue 96

The revision allows for alternate methods for enumerating the stock oocyst and microsphere suspensions.

#### Issue 97

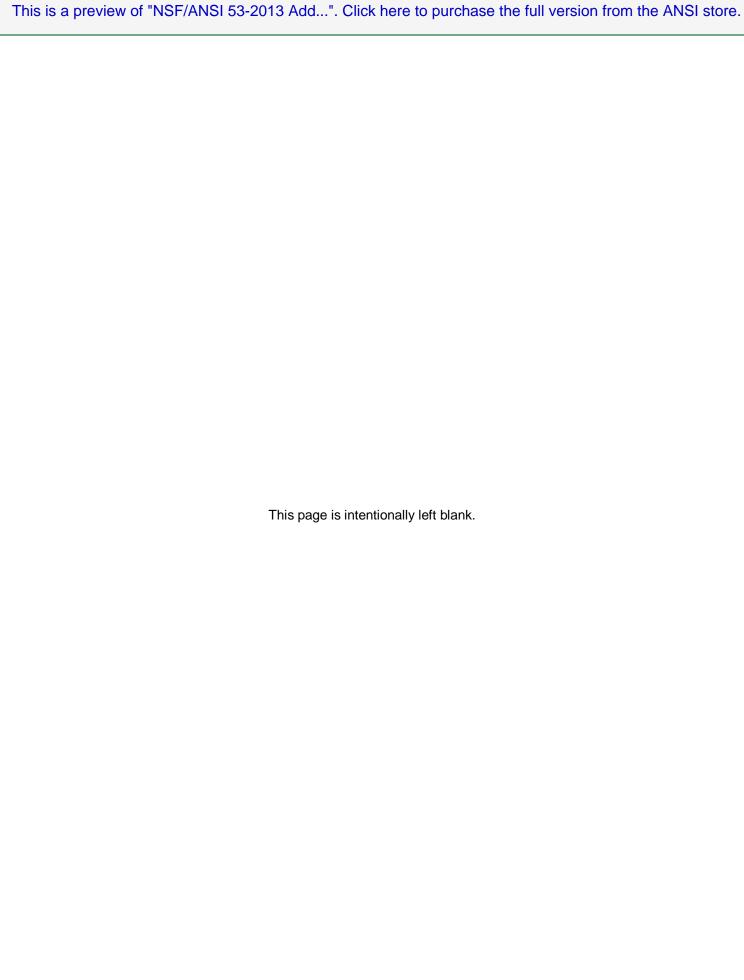
The revision removes the reference to using formaldehyde as a disinfectant when preparing oocyts in the procedure under Annex A of NSF/ANSI 53.

This Standard was developed by the NSF Joint Committee on Drinking Water Treatment Units using the consensus process described by the American National Standards Institute.

Suggestions for improvement of this Standard are welcome. This Standard is maintained on a Continuous Maintenance schedule and can be opened for comment at any time. Comments should be sent to Chair, Joint Committee on Drinking Water Treatment Units at <a href="mailto:standards@nsf.org">standards@nsf.org</a>, or c/o NSF International, Standards Department, P.O. Box 130140, Ann Arbor, Michigan 48113-0140, USA.

\_

<sup>&</sup>lt;sup>2</sup> The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. Therefore, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.



© 2014 NSF NSF/ANSI 53 – 2013 Addendum

NSF/ANSI Standard for Drinking Water Treatment Units —

# Drinking water treatment units — Health effects

## 1 General

1.1 Purpose

•

1.2 Scope

.

## 1.3 Alternate materials, designs, and construction

While specific materials, designs, and construction may be stipulated in this Standard, systems that incorporate alternate materials, designs, and construction may be acceptable when it is verified that such systems meet the applicable requirements stated herein.

•

## 6 Minimum performance requirements

•

## 6.1 Performance indication of chemical reduction capacity

.

6.1.4.3.1 Flow test method

- a) The test systems shall be conditioned following the manufacturer's instructions.
- b) The systems shall be tested with general test water as specified in 6.1.4.2.
- c) Two systems shall be installed on the test rig in accordance with the manufacturer's instructions, with a calibrated flow meter in line. Faucet mounted systems shall be installed downstream of the solenoid valve.