

# Webinar 3: IDDSI: Testing measures for beverage quality control and safety

International Dysphagia Diet Standardization Initiative (IDDSI) Training Series

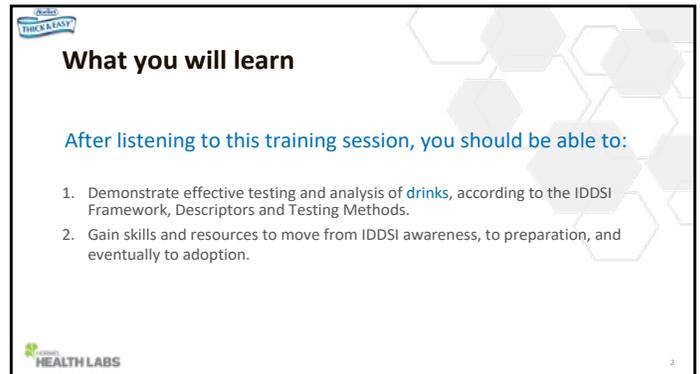


WEBINAR 03

## IDDSI: Testing measures for beverage quality control and safety

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### What you will learn

After listening to this training session, you should be able to:

1. Demonstrate effective testing and analysis of **drinks**, according to the IDDSI Framework, Descriptors and Testing Methods.
2. Gain skills and resources to move from IDDSI awareness, to preparation, and eventually to adoption.

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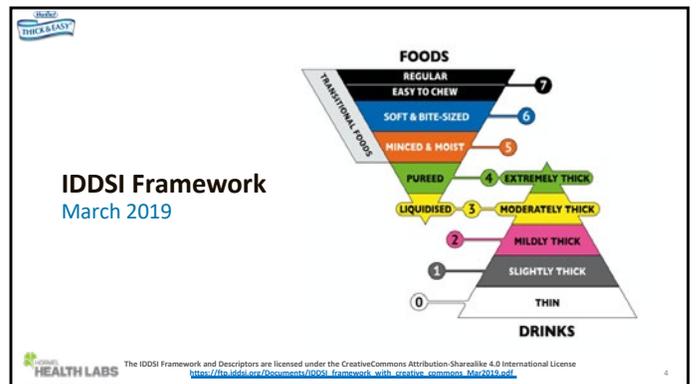
PRESENTER

### Karen Sheffler

MS, CCC-SLP, BCS-S

- Board Certified Specialist in Swallowing and Swallowing Disorders
- IDDSI Champion
- Founder of [www.SwallowStudy.com](http://www.SwallowStudy.com)

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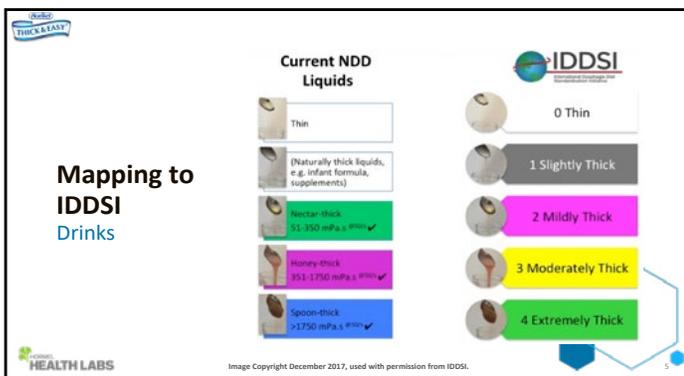


### IDDSI Framework

March 2019

The IDDSI Framework and Descriptors are licensed under the Creative Commons Attribution-ShareAlike 4.0 International License <https://bit.ly/2661oaz>

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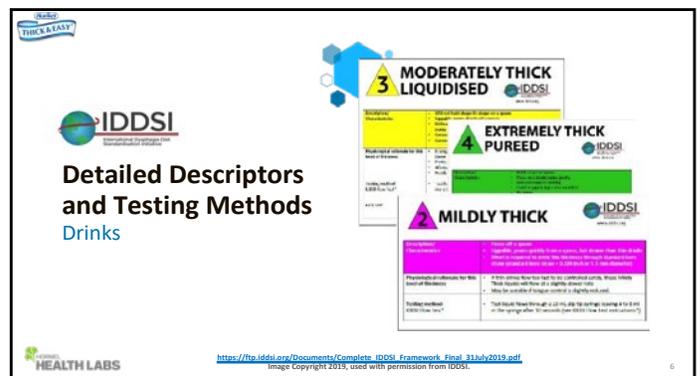


### Mapping to IDDSI Drinks

Current NDD Liquids	IDDSI
Thin	0 Thin
(Naturally thick liquids, e.g. infant formula, supplements)	1 Slightly Thick
Nectar-thick 51-350 mPa.s @20°C ✓	2 Mildly Thick
Honey-thick 551-1750 mPa.s @20°C ✓	3 Moderately Thick
Spoon-thick >1750 mPa.s @20°C ✓	4 Extremely Thick

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### Detailed Descriptors and Testing Methods

**3 MODERATELY THICK LIQUIDISED**

**4 EXTREMELY THICK PUREED**

**2 MILDLY THICK**

<https://bit.ly/2661oaz>

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**THICK & EASY**

## IDDSI Liquid Testing Methods

1. IDDSI Flow Test
2. IDDSI Fork Drip Test
3. IDDSI Spoon Tilt Test

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## 1. IDDSI Flow Test

Similar to Posthumous Funnel used in dairy industry to measure liquid thickness

Van Vliet et al. (2002), Food Quality and Preference, 13, 227-236; Kutter et al. (2011), 42: 217-227

*"Geometry allows for both shear and elongation that more closely matches flow conditions within the oral cavity"*

**IDDSI Flow Test**  
IDDSI level depends on liquid remaining after 10 seconds flow.

Check your syringe: 0-10 ml scale = 61.5 mm

Level 4: Test with fork or spoon

Level 3: Test with fork or spoon

Level 2: Test with fork or spoon

Level 1: Test with fork or spoon

Level 0: Test with fork or spoon

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## 1. IDDSI Flow Test

**YouTube** **IDDSI** 886 subscribers

[https://youtu.be/16wh\\_0Q7X6](https://youtu.be/16wh_0Q7X6)

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## 1. IDDSI Flow Test

Example videos of the IDDSI Flow Test can be found at:

- IDDSI YouTube Channel
- IDDSI App
- [www.iddsi.org](http://www.iddsi.org) → IDDSI Framework tab → Drink Testing Methods

Get your flow test card:  
[http://ftp.iddsi.org/Documents/IDDSI\\_Flow\\_Test\\_Cards\\_USA\\_vers\\_89x51mm\\_FINAL\\_with\\_bleed.pdf](http://ftp.iddsi.org/Documents/IDDSI_Flow_Test_Cards_USA_vers_89x51mm_FINAL_with_bleed.pdf)

**IDDSI Flow Test**  
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Level 4: Test with fork or spoon

Level 3: Test with fork or spoon

Level 2: Test with fork or spoon

Level 1: Test with fork or spoon

Level 0: Test with fork or spoon

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## 1. IDDSI Flow Test Tips

Not all syringes are created equal!

Length of 10ml scale on syringe = 61.5mm

REF 303134

REF 302995

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## 1. IDDSI Flow Test

**YouTube** **IDDSI** 886 subscribers

**2** Mildly Thick Liquid 2  
4ml - 8ml

**1** Slightly Thick Liquid 1  
1ml - 4ml

**0** Thin Liquid 0  
This liquid runs fast through a syringe in <10 seconds.  
\* Calibrate syringe: Level 0 should flow through in 7 seconds.

**Flow Drip Test**  
Level 2

**Flow Drip Test**  
Level 1

[https://youtu.be/0Xel\\_0L4Hw](https://youtu.be/0Xel_0L4Hw)  
[https://youtu.be/0Xel\\_0L4Hw](https://youtu.be/0Xel_0L4Hw)

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## 1. IDDSI Flow Test

**NOTE**  
LEVEL 4 Liquid does not flow through the syringe.

Test with Fork Drip Test and Spoon Tilt Test.

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## IDDSI Testing Methods

1. IDDSI Flow Test
2. IDDSI Fork Drip Test
3. IDDSI Spoon Tilt Test

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## 2. Fork Drip Test

Used to measure levels 3 and 4

- Thick drinks (moderately and extremely thick) and smooth foods (liquidized and puree)
- Do they flow through the slots/tines of a fork?

**3** Level 3 – Liquidized / Moderately Thick  
 • Drips slowly or in strands/dollops through the tines of a fork

**4** Level 4 – Puree / Extremely Thick  
 • Sits in a mound or pile on top of the fork  
 • Only a small amount may flow through and form a tail below fork tines  
 • Does not flow or drip continuously through the fork tines

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## IDDSI Testing Methods

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## 2. Fork Drip Test

YouTube IDDSI 898 subscribers

**4** Level 4 Extremely Thick  
**3** Level 3 Moderately Thick

<https://youtu.be/rs0K6G63CY>  
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## IDDSI Testing Methods

1. IDDSI Flow Test
2. IDDSI Fork Drip Test
3. IDDSI Spoon Tilt Test

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### 3. Spoon Tilt Test

**Spoon Tilt Test**

**Level 4 Extremely Thick** plops of spoon when tilted; slides off spoon with little left in spoon.

**Level 3 Moderately Thick** easily pours from spoon when tilted.



<https://youtu.be/bsOKG6S3CY>  
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**Notice difference between:**

Corn-starch (cloudy) vs. Gum-based (clear) thickened liquids.



Xanthan gum

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### 2. Fork Drip Test

Used to measure levels 3 and 4

- Thick drinks (moderately and extremely thick) and smooth foods (liquidized and puree)
- Do they flow through the slots/tines of a fork?

**Level 3 – Liquidized / Moderately Thick**

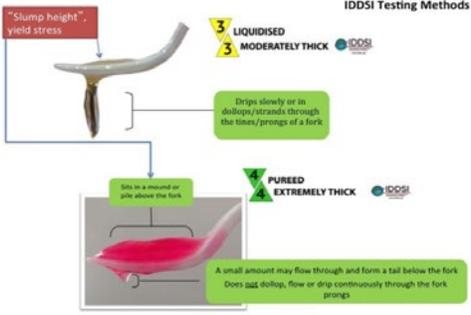
- Drips slowly or in strands/dollops through the tines of a fork

**Level 4 – Puree / Extremely Thick**

- Sits in a mound or pile on top of the fork
- Only a small amount may flow through and form a tail below fork tines
- Does not flow or drip continuously through the fork tines

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### IDDSI Testing Methods



**Level 3 LIQUIDIZED / MODERATELY THICK**

- "Slump height" - yield stress
- Drips slowly or in strands/dollops through the tines/prongs of a fork

**Level 4 PUREE / EXTREMELY THICK**

- Sits in a mound or pile above the fork
- A small amount may flow through and form a tail below the fork prongs
- Does not drip continuously through the fork prongs

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### Importance of Dual Labeling



**THICKENER MIXING CHART**

IDDSI	Thick	Moderately Thick	Extremely Thick
4	1 T	1 T + 1 tsp	1 T + 1/2 tsp
3	1 T + 1/2 tsp	2 T	2 T + 1/2 tsp
2	2 T + 1/2 tsp	3 T	3 T
1	3 T	3 T + 1/2 tsp	4 cups

T = Tablespoon, tsp = teaspoon, 3 tsp = 1 T

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See FAQ tab on **IDDSI.org**

<https://iddsi.org/faq/>

**FAQ Category: Drinks**

**Q:** My facility has used the terms 'nectar' and 'honey' for decades; why weren't these terms used in the IDDSI framework?

**A:** Two international stakeholder surveys were conducted regarding texture terminology, and received more than 3000 responses. Although the terms 'nectar' and 'honey' were widely understood in some parts of the world, they were not understood in other parts of the world, particularly Asia. Other considerations included the natural variability of 'honey' in its crystalline and liquid states, and that the food honey is a botulism risk for infants under the age of 12 months. As an international framework suitable for use across the age spectrum, it was decided that terms that described variations of drink thickness would be most appropriate.

**IDDSI**

This document is to be read in conjunction with the Complete IDDSI Framework, IDDSI Testing Methods and IDDSI Evidence documents (<http://iddsi.org/resources/#framework>).

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**Consumer Handouts for people with dysphagia and caregivers**

Handouts in Pediatric and Adult, including

1. Descriptions and pictures
2. Liquid Examples
3. Liquids To Avoid

→ [IDDSI.org](https://iddsi.org) → Resources → General Resources → Consumer Handouts for Adults and Pediatrics



**LIQUIDISED**

Use of Level 3 Liquidised Food for Adults

What is this thickness level?

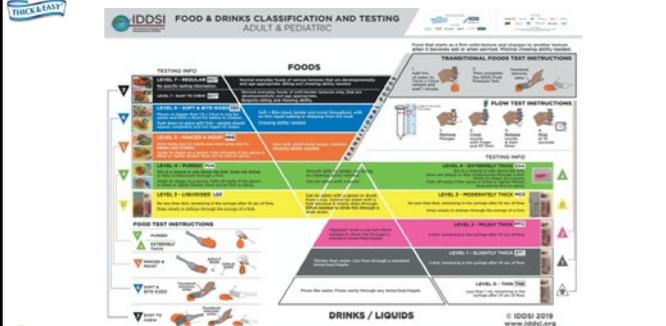
Why is this thickness level used for adults?

How do I measure my liquid or drink to make sure it is Level 3 liquidised?

<https://iddsi.org/resources/>

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**FOOD & DRINKS CLASSIFICATION AND TESTING ADULT & PEDIATRIC**



**FOODS**

**DRINKS / LIQUIDS**

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[https://ftp.iddsi.org/Documents/IDDSI\\_Whole\\_Framework\\_A3\\_Poster\\_Final.pdf](https://ftp.iddsi.org/Documents/IDDSI_Whole_Framework_A3_Poster_Final.pdf)

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**After the Webinar:**

1. Refer to the IDDSI FAQs for answers to questions: <https://iddsi.org/faq/>
2. Hands on Beverage Testing: Play each of the IDDSI drink testing videos, pausing in between so you can practice the testing methods. Videos can be found here: <https://www.youtube.com/channel/UC0i9FDjwR0L5svIGCvIqHA/videoes>
3. Watch Webinar 4: IDDSI: How does IDDSI work in the real world? Preparing food and drinks



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**Additional Resources**

- IDDSI Flow Test Card: [https://ftp.iddsi.org/Documents/IDDSI\\_Flow\\_Test\\_Cards\\_USA\\_vers\\_89x51mm\\_FINAL\\_with\\_bleed.pdf](https://ftp.iddsi.org/Documents/IDDSI_Flow_Test_Cards_USA_vers_89x51mm_FINAL_with_bleed.pdf)
- IDDSI App – Go to your App store on your iPhone or android and search "IDDSI"
- Consumer handouts for thickened liquids: Go to <https://iddsi.org/resources/> → General Resources → Consumer Handouts for adults and pediatrics



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**Resources for Professionals**

- IDDSI Audit for Liquids [https://iddsi.org/wp-content/uploads/2018/07/liquids\\_10\\_1\\_12\\_13\\_18-January-2018.pdf](https://iddsi.org/wp-content/uploads/2018/07/liquids_10_1_12_13_18-January-2018.pdf)
- Review IDDSI Slide Presentation: "Using the IDDSI Flow test in clinical practice: How thick is thick and does thickness really matter?" [http://ftp.iddsi.org/Documents/IDDSI\\_Webinar\\_Sep\\_18\\_19\\_2018\\_Using\\_the\\_IDDSI\\_Flow\\_Test\\_in\\_Clinical\\_Practice.pdf](http://ftp.iddsi.org/Documents/IDDSI_Webinar_Sep_18_19_2018_Using_the_IDDSI_Flow_Test_in_Clinical_Practice.pdf)

Free IDDSI webinar (90 minutes, 1.5 CPE)

- <https://www.heckydorner.com/free-resources/free-cpes/>
- <https://www.hormelhealthlabs.com/resources/for-healthcare-professionals/> (Scroll down to Free CPE Training)



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