



Value Life

## NEONATOLOGY

ENTERAL NUTRITION

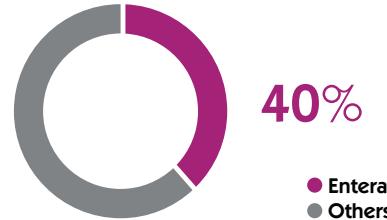
**nutrisafe<sup>2</sup>** The safe enteral feeding system adapted to neonates



# HISTORY OF nutrisafe<sup>2</sup>



## MISCONNECTIONS



**Misconnections** in enteral nutrition have been a **recognized issue** at an international level for several years. **40%** of these misconnections are attributed to **enteral** clinical area, and the consequences are often **critical** and deadly <sup>(1)</sup>.

Vygon creates nutrisafe<sup>1</sup>,  
a reverse Luer system

1995

2005

2016

Today

Creation of the **ISO 80369** for safety connections including **ENFit<sup>®</sup>**, with concerns regarding the adequation with neonatal patients<sup>(2)</sup>

Vygon creates nutrisafe<sup>2</sup>, a safe system fully incompatible with Luer systems

Vygon keeps on track with nutrisafe<sup>2</sup>, ISO 80369-1 compliant and designed for premature and newborn babies

## IN NEONATOLOGY, THINK...



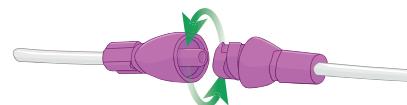
MORE THAN 20 YEARS  
OF EXPERIENCE IN  
NEONATOLOGY!

- No reported misconnection with nutrisafe<sup>2</sup>
- Satisfied customers from more than 40 countries

## SAFE

**Specially designed for neonatal patients**, nutrisafe<sup>2</sup> is a unique safe enteral feeding system incompatible with Luer and other small-bore connectors in accordance with ISO 80369-1 requirements. The risk of misconnection is minimized, and the patient safety is increased.

The **lockable system** provides additional security. Accidental disconnection is practically impossible, ensuring precious nutrients are received.



## CLEAN

Feeding tubes must not create extra risk to neonates by introducing **bacteria** into their digestive tract.

The design of **ENFit<sup>®</sup>** comes with the need of setting up a cleaning procedure, and that even followed thoroughly, only **31%** of connectors were **off residues<sup>(3)</sup>**.

Even when using specific adapted tools, the **cleaning is not sufficient** and the bacterial count doesn't differ from other cleaning methods<sup>(6)</sup>.

nutrisafe<sup>2</sup> is, by design, less prompt to keep residues. Indeed, nutrisafe<sup>2</sup> connectors have a **less threaded interior** to sequester milk or medication and is **much smaller**.<sup>(5)</sup>

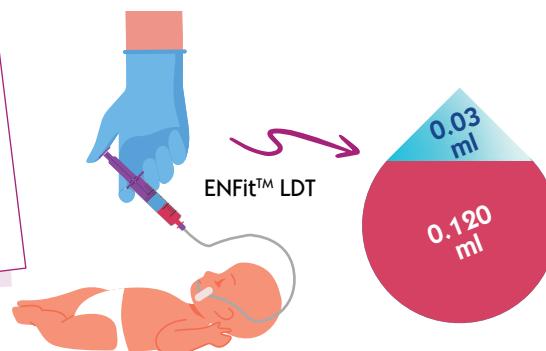


ENFit<sup>®</sup>    nutrisafe<sup>2</sup>

## ACCURATE

Dose **accuracy** is of great **importance** in the **NICU** wards, especially for **critical drugs administration**. Fluid displacement creates an **overdosing risk** when using the syringe.

FOR  
EXAMPLE



OVERDOSING RISK  
DUE TO DESIGN<sup>(2)(4)</sup>

nutrisafe<sup>2</sup>  
0.029 ml

Low dose tip  
0.120 ml

ENFit<sup>®</sup>  
0.148 ml<sup>(2)</sup>

DOSE X 5  
RESPIRATORY DISTRESS  
CARDIOVASCULAR DISORDER



Using **ENFit<sup>®</sup> LDT** in neonatology is **more likely** to result in administering higher than prescribed **doses** to the neonates.

# SCIENTIFIC EVIDENCE ON ACCURACY

Accuracy of ENFit® LDT syringes and nutrisafe2 syringes was compared<sup>(7)</sup> using Dosing Variance calculation.

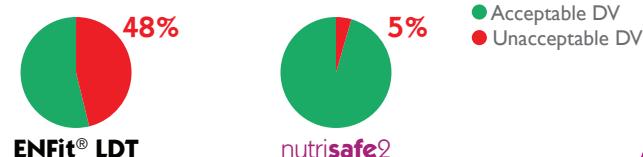
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WHAT IS DOSING VARIANCE (DV)?

$$DV = \frac{\text{Actual Volume} - \text{Intended Volume}}{\text{Intended Volume}} \times 100$$

Dosing variance is acceptable within a range of +/- 10%

- 150 tests conducted for each type of syringe. Of those tests:

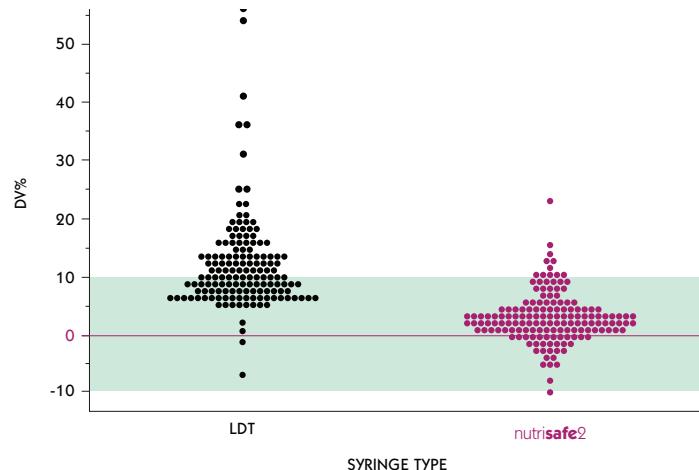


- Mean absolute dosing variance



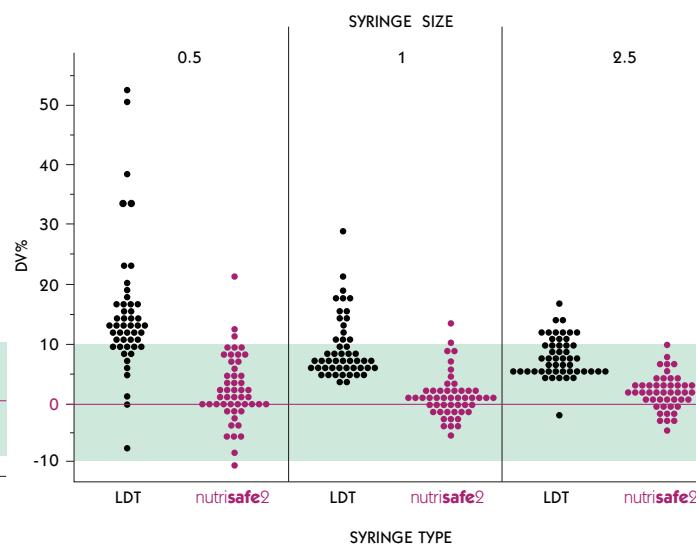
THE nutrisafe2 SYRINGE HAS GREATER DOSING ACCURACY AS COMPARED WITH ENFIT® LDT SYRINGE

## IN MORE DETAILS...



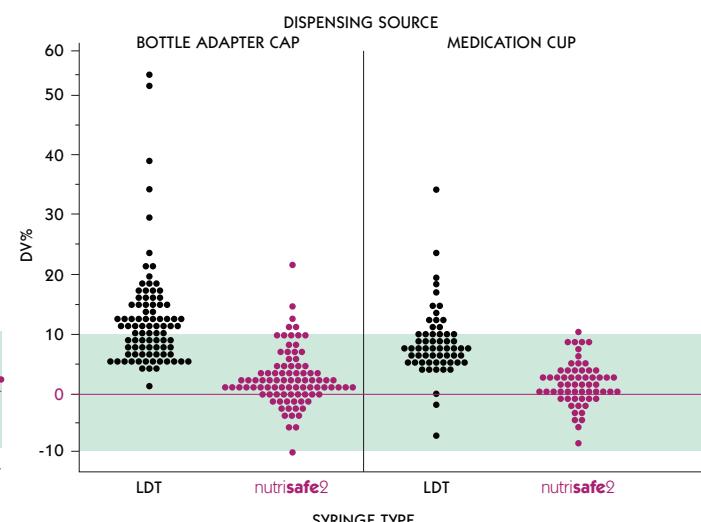
- Comparison between syringe type

nutrisafe2 is more accurate than the ENFit® LDT: 95% of the doses have an acceptable dosing variance.



- Comparison between syringe types and sizes

Dosing variance increases while the syringe volume decreases. However nutrisafe2 still has a mean variance within the acceptability range for all volumes.



- Influence of adapter and medication cup

Bulk bottle adapters don't fix the inaccuracy issue with the ENFit® Low Dose Tip. Medication cup were associated with acceptable DV, nutrisafe2 is more accurate with these accessories.



FEEDING  
TUBES



SYRINGES



EXTENSION  
LINES



SAMPLING  
DEVICES



ACCESSORIES



SYRINGE  
PUMP

## REFERENCES

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- (7) O'Mara K, Campbell C, O'Mara R. Comparison of Dosing Accuracy Between the ENFit LDT and a Neonatal-Specific ISO-Compliant Enteral Syringe. *J Pediatr Pharmacol Ther.* 2023;28(3):255-261. doi: 10.5863/1551-6776-28.3.255. Epub 2023 Jun 2. PMID: 37303768; PMCID: PMC10249973.

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FOR FURTHER INFORMATION, PLEASE CONTACT: [questions@vygon.com](mailto:questions@vygon.com)

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