




Product Guide

2020



TreffLab Quality Grades

Characteristics	CleanRoom Pure®	LoTrace® DNA	LoTrace® Forensics
	 CleanRoom® PURE	 LoTrace® DNA	 LoTrace® FORENSICS
Free of RNase	•	•	•
Free of DNase	•	•	•
Free of human DNA	•	•	•
Free of PCR inhibitors	•	•	•
Free of endotoxins (pyrogenes, LAL2)	•	•	•
Free of ATP (Luciferase)	•	•	•
Low binding DNA (PCR)		•	•
Ethylene oxide treatment			•
Product group certificate	•	•	•
Lot Certificate	(•)*	(•)*	•

(•)* on request

CleanRoom Pure®

Absolutely PURE Right From The Start

- ▶ **ISO 14644-1 Clean Room Class 8 Production**
Microbiological and 24/7 environmental monitored
Contamination free production
No human DNA

- ▶ **Quality Parameters**

Free of RNase	(< 5x10E-9 Kunitz units)
Free of DNase	(< 5x10E-6 Kunitz units)
Free of human DNA	(< 2 pg DNA)
Free of PCR inhibitors	(< 10 copies)
Free of endotoxins	(< 0.001 EU/ml)
Free of ATP	(< 30 RLU)



High Throughput but Precise – Obstacles in Bioanalysis

- ▶ **«The Well-Known»**

RNase	Enzymes that cleave RNA
DNase	Enzymes that cleave DNA
Human DNA	Contaminates DNA to be analyzed
PCR inhibitors	Deactivates «PCR» polymerases
Endotoxins	Influences metabolic pathways
ATP	The molecular battery of all life on earth

- ▶ **«The Pain»**

RNase	Prevents RNA research
DNase	Prevents DNA research
Human DNA	Causes wrong DNA analysis
PCR inhibitors	Prevents PCR analysis
Endotoxins	Influences metabolic analysis
ATP	There is «unknown life» contamination

- ▶ **«The Aid» - TreffLab CleanRoom Pure® Quality**

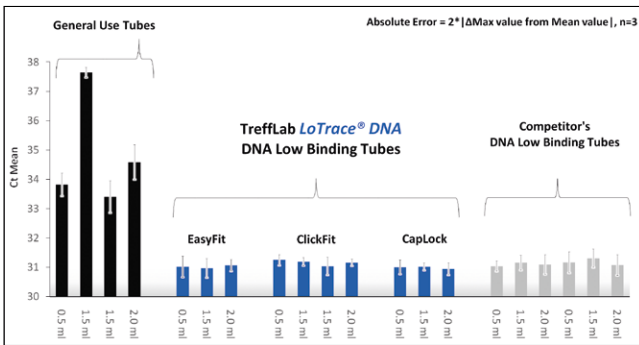
Never Lose Your Valuable DNA Trace Sample with Nolato Treff Low Binding PCR Grade

► **LoTrace® DNA**

- DNA low binding surface
- No additives
- CleanRoom Pure® production environment

Our «LoTrace® DNA» TreffLab products are designed for molecular-biological and biochemical DNA sample preparation and DNA assays. These products are manufactured in accordance with TreffLab standard «CleanRoom Pure®» from virgin polypropylene granulate in a special additive-free process to support users in their need for «DNA neutral» non-binding sample containers for lossless DNA purification.

Comparison – Normal Grade Tubes vs. Low Binding Tubes



High Ct in real time PCR indicates high loss of DNA during sample preparation with normal grade tubes.

Analyses of surface quality were carried out by an independent Swiss laboratory accredited ISO/IEC17025 for real-time PCR

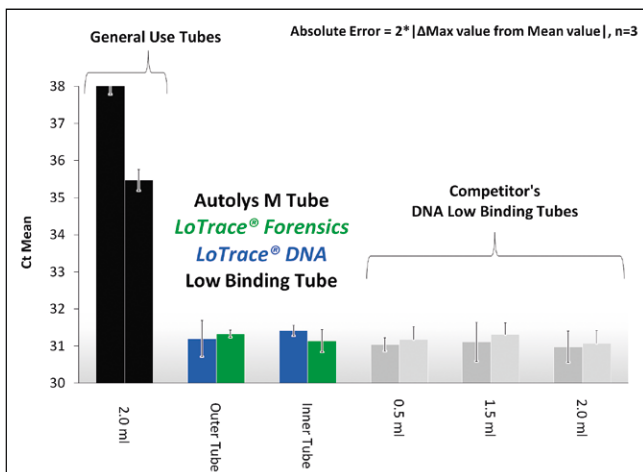
LoTrace® Forensics

A Double Security Level for your DNA Analyses

► **LoTrace® DNA**

- Ethylene Oxide (EO) processed
- DNA low binding surface
- No additives
- CleanRoom Pure® production environment

Our «LoTrace® Forensics» Microtubes are designed for DNA sample preparation and DNA assays to comply with the special requirements of forensics DNA analysis. These microtubes are manufactured in accordance with the TreffLab standard «CleanRoom Pure®» from virgin polypropylene granulates. A special additive-free process guaranties users «DNA neutral» non-binding sample containers for lossless DNA purification. In addition, the already absolutely pure surface is treated with Ethylene Oxide, as recommended by forensic applications to provide double security level.



► **ISO 18385, ISO 11135**

Reduction factor human DNA	> 1000
Reduction Factor DNase	2.9
Reduction factor RNase	10
Ct value shift of PCR inhibitor	> 1

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