



Reliable performance under variable conditions
Lyo-ready reagents for point-of-care diagnostics



The design of reagents sets the pace for point-of-care diagnostics

Rapid onsite analyses to support diagnosis and treatment decisions have become a cornerstone of medicine in our globalized society. Molecular Point-of-care testing (POCT) not only extends the reach of modern medicine to broader populations, but also underpins our understanding and management of public health.

Assays for molecular PoC must work reliably, delivering accurate results under variable handling and environmental conditions. They must also be easy to transport, store and use. Finally, they must be manufactured quickly, safely and cost-effectively. Using reagents designed for the unique conditions of PoC is key to achieving these requirements.

Speed – fast reactions for short turnaround

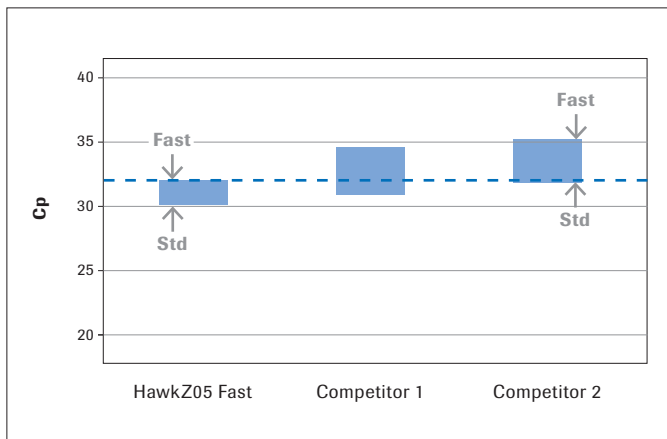


Figure 1: Roche CustomBiotech enzymes enable short extension times. Compared to enzymes from other providers, **HawkZ05 Fast** show earlier Cp values with a short reverse transcription step (5 min) and a smaller shift in Cp value between the standard and the fast PCR protocol. Data on file at Roche.

Sensitivity – detect targets with low copy number

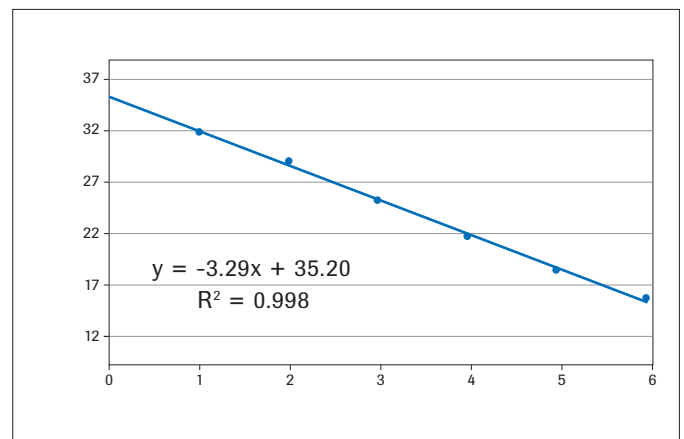


Figure 2: Roche CustomBiotech enzymes exhibit excellent reaction efficiency and linearity down to low target copy numbers. **NxtScript 2G** reverse transcriptase allows detecting from 1000 ng RNA down to 0.01 ng per reaction (a difference of 6 orders of magnitude). Data on file at Roche.

Robustness – perform even in the presence of inhibitors

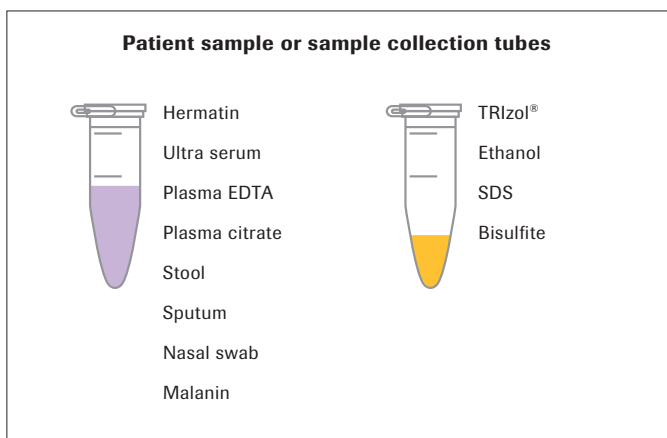


Figure 3: Roche CustomBiotech lyo-ready enzymes have been tested with a broad range of inhibitors inherent to liquid biopsies, tissues or standard sample preparation methods. Data on file at Roche.

Direct dry down – easier production, stable performance

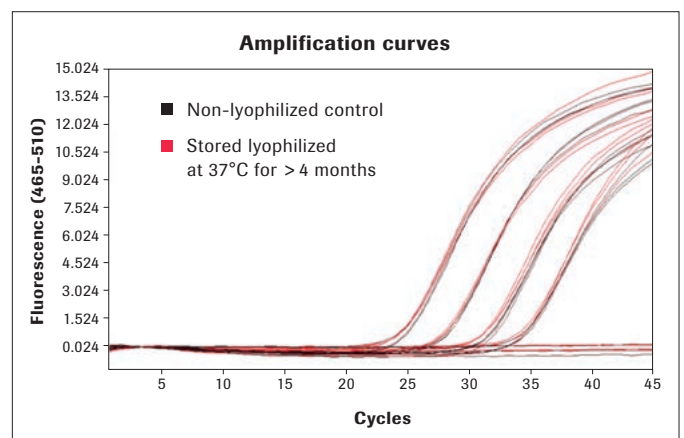


Figure 4: Without dialyzing, Roche CustomBiotech enzymes like **KAPA3G HotStart** DNA polymerase can be lyophilized directly and show the same performance as non-lyophilized controls even after lengthy storage at warm temperatures. Data on file at Roche.

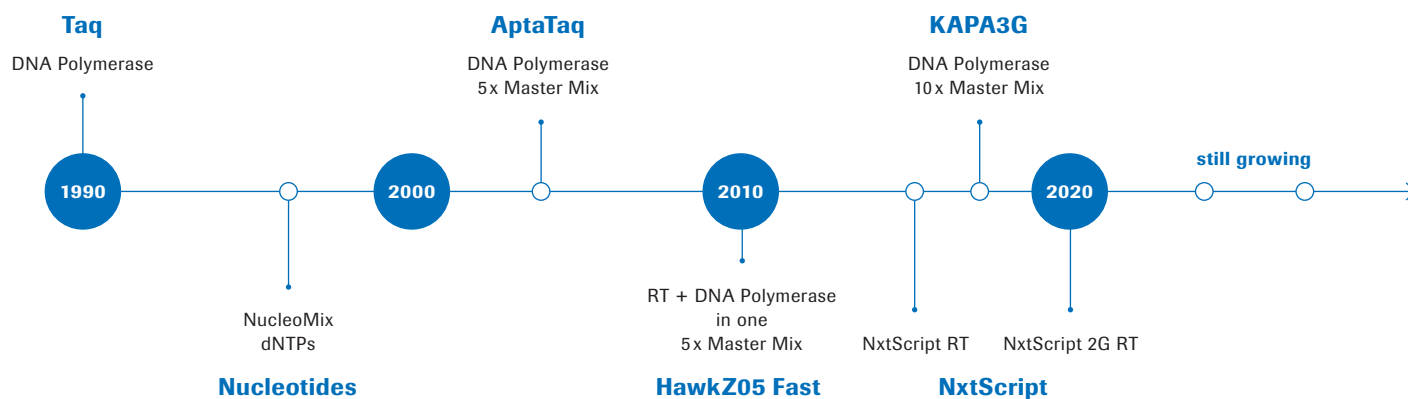
Roche CustomBiotech Iyo-ready enzymes: a quick overview

Product	DNA	RNA	Master mix	HotStart	Concentration (U/ μ L)	% glycerol (v/v)	Comments
Taq DNA Polymerase	Yes	-	-	-	50	≤ 0.1	-
KAPA3G HotStart DNA Polymerase	Yes	-	10x	Antibody-mediated	30	≤ 0.1	Designed for speed and inhibitor tolerance; suitable for probe-based PCR
AptaTaq DNA Polymerase	Yes	-	5x	Aptamer-mediated	50	≤ 0.1	2 additional formulations: LDx is proven free of contaminating DNA; delta exo is N-terminal truncated and suitable for mismatch detection in allele-specific PCR, SNP analysis, genotyping
NxtScript 2G Reverse Transcriptase	-	Yes	-	-	500	≤ 0.1	Highly concentrated and inhibitor-tolerant; enables RT steps at up to 70°C
HawkZ05 Fast DNA Polymerase	Yes	Yes	5x	Aptamer-mediated	500	≤ 0.1 master mix: 0.5	Reversible hot start DNA polymerase for fast one-step RT-PCR

Your partner above and beyond enzymes

The Roche CustomBiotech offering for PoC is not just components – it's expertise, advice and a secure global supply of materials to keep your business going. We offer premium reagents that you can use to design fast and simple assay protocols. We create solutions around real samples, both difficult targets and complex matrices. Finally, our reagents are manufactured in state-of-the-art facilities under strict quality control, so when you use Roche CustomBiotech materials, you build quality and compliance into your assay.

We foster innovation in the industry by continuously launching new glycerol-free and high concentration reagents



Regulatory disclaimer

For further processing only.

Taq DNA Polymerase and AptaTaq: For customers in the European Economic Area: Contains SVHC: octyl/nonylphenol ethoxylates. For further processing on its own or in a mixture as part of an IVD method and under controlled conditions only – acc. to Art. 56 (3) and 3 no. 23 REACH Regulation.

custombiotech.roche.com

Please contact your local CustomBiotech representative

Europe, Middle East, Africa, Latin America

Phone +49 621 759 8580
Fax +49 621 759 6385
mannheim.custombiotech@roche.com

United States

Phone +1 800 428 5433 (toll-free)
Fax +1 317 521 4065
custombiotech.ussales@roche.com

Canada

Phone +1 450 686 7050
Fax +1 450 686 7012
custombiotech.can@roche.com

Japan

Phone +81 3 6634 1046
Fax +81 3 5479 0585
japan.custombiotech@roche.com

Asia Pacific

Phone +65 6371 6638
Fax +65 6371 6601
apac.custombiotech@roche.com

Published by

Roche Diagnostics GmbH
Sandhofer Straße 116
68305 Mannheim
Germany

© 2022 Roche Diagnostics GmbH
All rights reserved.