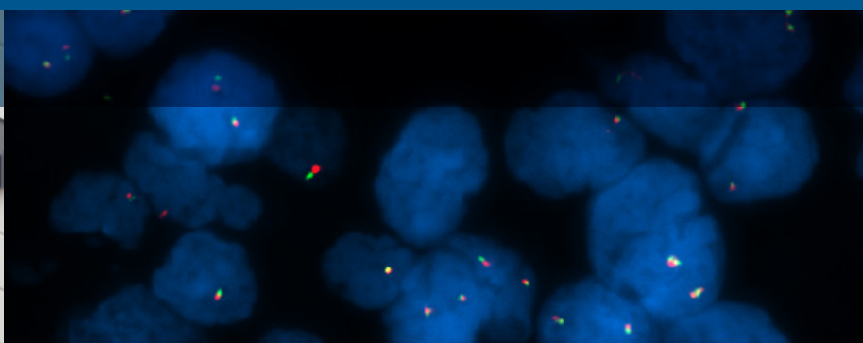


# IQFISH Fast Hybridization Buffer

High quality and fast FISH tests



# Accelerating Progress is in Our Genes

Fast results, high-quality signal, compatible with FFPE and blood/bone marrow samples



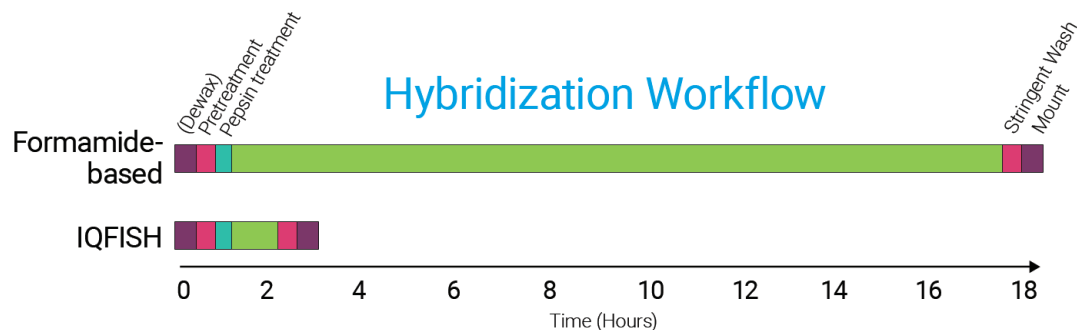
## Optimizing FISH laboratory workflow

Integrating FISH workflows consisting of different sample types, protocols, and demands for quick turn-around-times are challenges for many laboratories. Traditional hybridization assays require overnight probe incubation to ensure optimal hybridization efficiency. However, the requirement of overnight hybridization can negatively impact the laboratory's testing throughput. Achieving high quality FISH signals is essential for analyzing complex gene rearrangements. IQ FISH fast hybridization buffer offers a formamide free solution for *in situ* hybridization without compromising FISH signal quality.

- Fast Results
- High Quality Signals
- Formamide Free
- For FFPE and Cytology Samples

## Fast Sample to reporting for FISH testing

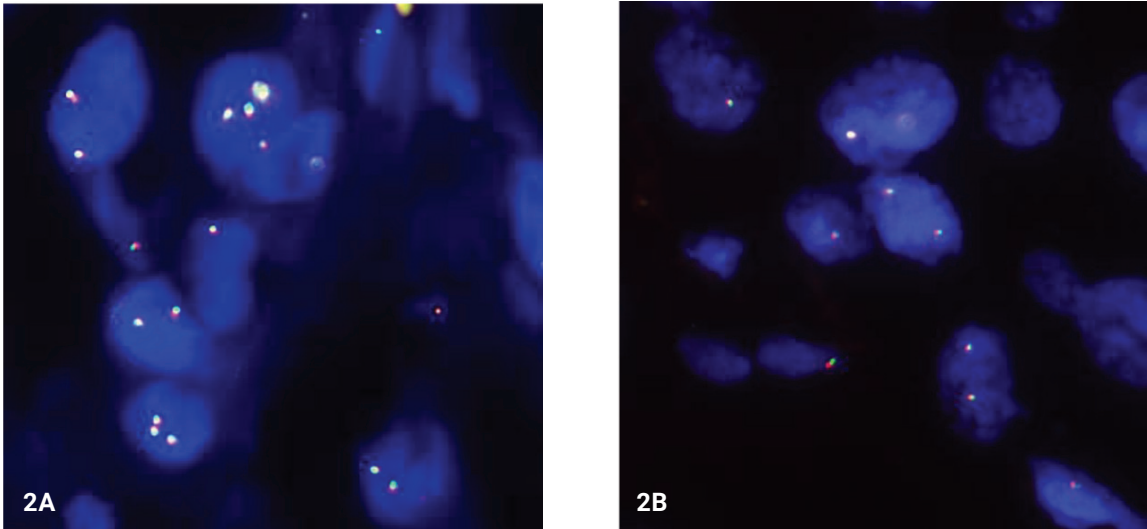
IQFISH Fast Hybridization Buffer allows the hybridization phase of a FISH assay to be completed in 1-2 hours and the entire assay can be completed in a half of a day. This workflow offers operational excellence and increased turnaround time compared to traditional ISH methods. IQFISH hybridization buffer workflow flexibility can facilitate same day repeat and Friday testing without weekend staffing.



**Figure 1.** Comparison between formamide and IQFISH buffer-based workflows. Pre and post hybridization FISH protocol steps remain unchanged when the IQFISH hybridization is implemented.

## High quality signal

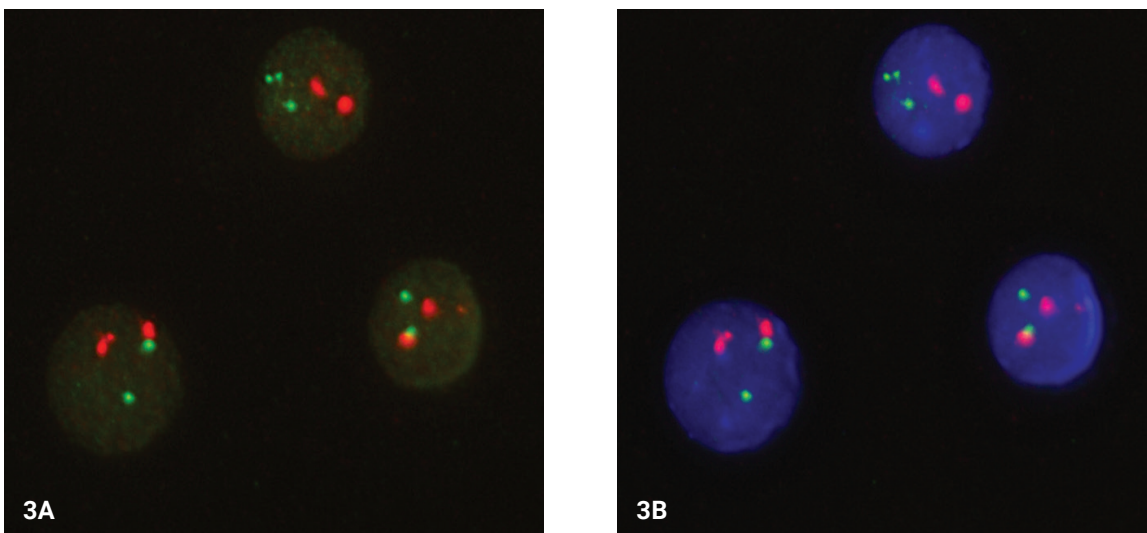
IQFISH fast hybridization buffer enables fast hybridization without compromising signal quality. In a FFPE solid tumor sample, optimal signal strength is achieved after a 1.5 hour hybridization.



**Figure 2A and 2B.** 1.5 hour hybridization examples with IQFISH fast hybridization buffer on FFPE lung adenocarcinoma using ALK (2A) and RET (2B) break-apart FISH Probes is implemented.

## FFPE and Cytology Samples

IQFISH Fast Hybridization can be used on sample types routinely hybridized by pathology and cytogenetics laboratories. IQFISH Fast Hybridization works with both FFPE and non-FFPE samples such as peripheral blood, bone marrow, and cultured cells. Regardless of sample type IQFISH Fast Hybridization buffer delivers high quality results.

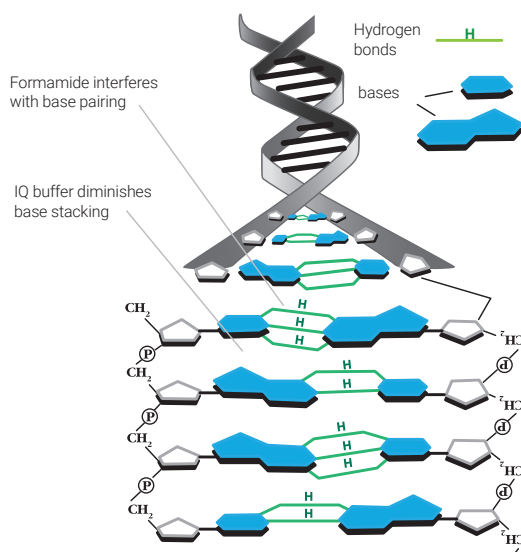


**Figure 3A and 3B.** A PML-RARA t(15;17) dual fusion probe was hybridized using IQFISH Fast Hybridization on bone marrow cells for 1.5 hours. Images were captured under epi-fluorescent microscopy without (3A) and with (3B) DAPI. The images without DAPI demonstrates a high signal to noise ratio. The image with DAPI shows clear signals with defined nuclear borders.

## How IQFISH buffer enables fast hybridization

Standard formamide FISH hybridization buffer lowers the melting temperature of nucleic acids by attacking hydrogen bonds and interfering with DNA base pairing. This interference slows down base pairing between the FISH probe and the DNA target in the specimen.

IQFISH buffer destabilizes the DNA helix by diminishing hydrophobic base stacking. Minimized base pairing interference enables fast binding between the FISH probe and specimen DNA. IQFISH Fast Hybridization buffer can be used with any nucleic acid probe.



**Figure 5.** Minimized base pairing interference enables fast binding between the FISH probe and specimen DNA to enable 1-2 hour hybridization.

## Ordering Information

Product	Part No.
IQFISH Fast Hybridization Buffer 900ul	G9414A
IQFISH Fast Hybridization Buffer 200ul	G9415A
IQFISH Fast Hybridization Buffer 200ul x 6	G9416A

D74864\_1.00

This information is subject to change without notice.

© Agilent Technologies, Inc. 2019, 2024  
Published in the USA, February 27, 2024  
29145 2024FEB07