

**Time is short**  
The list is not

1(p32)(STIL-TAL1)  
 t(1;11)(p32;q23)(MLL-EPS15)  
 t(1;11)(q21;q23)(MLL-MLLT11)  
**t(1;19)(q23;p13)(TCF3-PBX1)**  
 t(3;5)(q25;q34)(NPM1-MLF1)  
 t(3;21)(q26;q22)(RUNX1-MDS1/EVI1)  
**t(4;11)(q21;q23)(MLL-AFF1)**  
 t(5;12)(q33;p13)(ETV6-PDGFRB)  
 t(5;17)(q35;q21)(NPM1-RARA)  
 t(6;9)(p23;q34)(DEK-NUP214)  
 t(6;11)(q27;q23)(MLL-MLLT4)  
**t(8;21)(q22;q22)(RUNX1-RUNX1T1)**  
 t(9;9)(q34;q34)(SET-NUP214)  
 t(9;11)(p22;q23)(MLL-MLLT3)  
 t(9;12)(q34;p13)(ETV6-ABL1)  
**t(9,22)(q34;q11)(BCR-ABL1)**  
 t(10;11)(p12;q23)(MLL-MLLT10)  
 t(11;17)(q23;q21)(MLL-MLLT6)  
 t(11;17)(q23;q21)(ZBTB16-RARA)  
 t(11;19)(q23;p13.1)(MLL-ELL)  
 t(11;19)(q23;p13.3)(MLL-MLLT1)  
**t(12;21)(p13;q22)(ETV6-RUNX1)**  
 t(12;22)(p13;q11)(ETV6-MN1)  
**t(15;17)(q24;q21)(PML-RARA)**  
**inv(16)(p13;q22)(CBFB-MYH11)**  
 t(16;21)(p11;q22)(FUS-ERG)  
 t(17;19)(q22;p13)(TCF3-HLF)  
 t(X;11)(q13;q23)(MLL-FOXO4)

Run a  
**HemaVision® 7Q**

7 Translocations  
40+ Breakpoints  
In just 4 hours

CE-IVD



Visitation / RNA extraction



HemaVision® 7Q screen



For all major qPCR platforms



Treatment planning

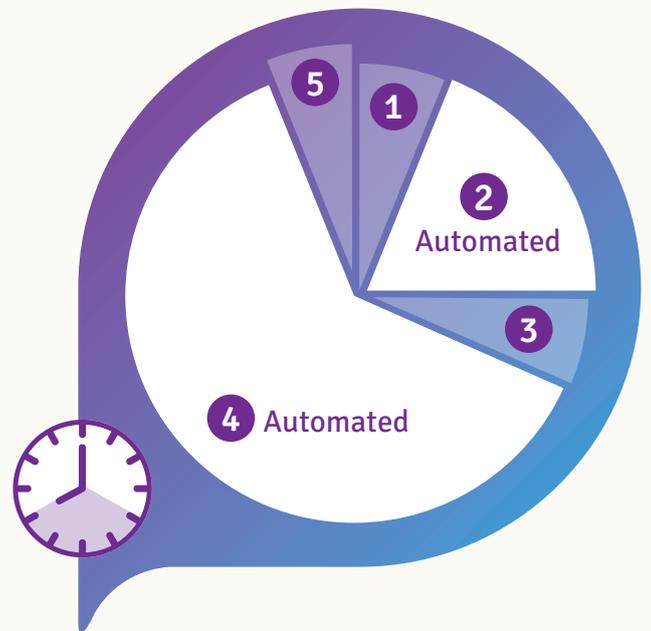


# Fast results

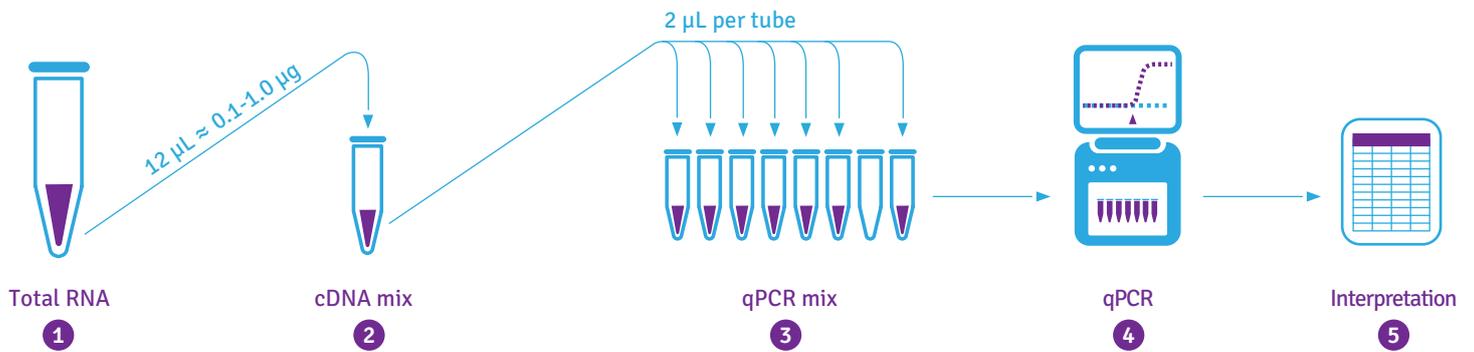
## Optimum treatment

### HemaVision® 7Q

- Screening test for AML, ALL and CML
- Detection of 7 translocations
- Detection of +40 breakpoints and splice variants
- In just 4 hours



Level of automation in 4 hour screening process



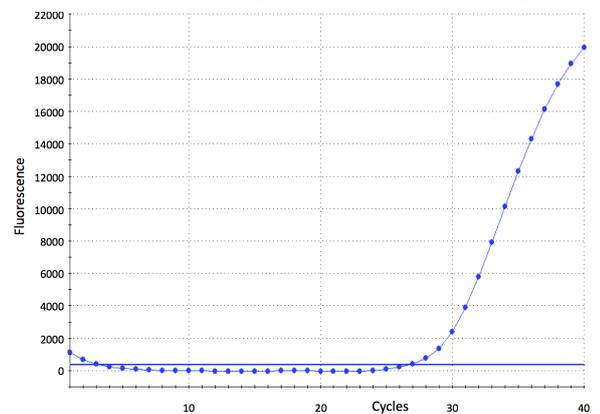
### Working steps – which are as follows:

1. RNA is extracted from peripheral blood or bone marrow using a RNA extraction kit.
2. 12 µL RNA is added to a ready-to-use HemaVision® 7Q cDNA reaction tube and incubated for 45 minutes.
3. 2 µL cDNA reactions is transferred to each of the 7 pre-mixed HemaVision® 7Q qPCR reaction tubes.
4. Run a qPCR in a real-time PCR instrument for 2.5 hours.
5. Results from the qPCR are used for identification of the translocation using a simple interpretation table. See interpretation overview on the next page.

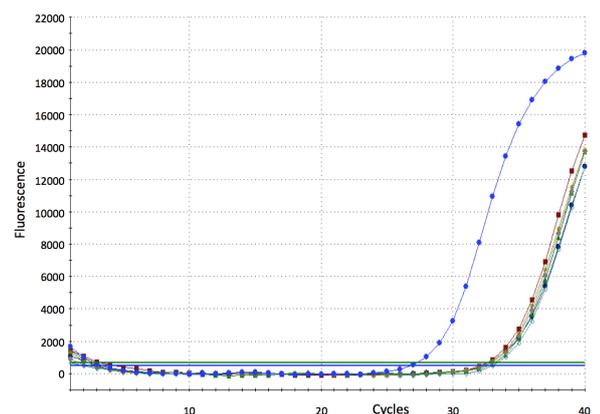
### Instrument compatibility

HemaVision® 7Q is designed to be used in real-time PCR instruments having optical filters for FAM, ROX and Cy5 fluorescent light. No optical filter is needed for a passive reference signal.

The cDNA reaction tubes contain specific primers for fusion genes and reference genes plus an Internal Amplification Control (IAC) DNA template. It also contains nucleotides, buffers and RT-enzyme. The IAC is a control for equal amounts of cDNA reaction have been transferred into each of the qPCR reaction tubes. As each qPCR reaction receives 5000 molecules of IAC from the cDNA reaction, the IAC functions as an internal marker for the performance of the qPCR. See amplification plot 2.



**HV7Q amplification plot 1:**  
FAM signal from positive t(15;17) PML-RARA (S) (tube no. 2)



**HV7Q amplification plot 2:**  
FAM signal from ABL reference gene (tube no. 8) and Cy5 signal from Internal Amplification Control IAC (tube no. 1-6,8)

The qPCR reaction tubes contain primers and probes plus nucleotides, buffer and enzyme enabling specific detection of fusion gene and reference gene transcripts plus the IAC. Primers are designed to detect both common and rare breakpoints in 7 translocations associated with leukemia.

# Interpretation overview

Specific amplification of fusion gene transcripts are detected using FAM and ROX labeled hydrolysis probes. The IAC is detected by a Cy5 labeled hydrolysis probe. HemaVision® 7Q detects the transcript level of the reference gene Abelson (ABL-1). This reference gene has stable transcription in different types of samples and is recommended by Europe Against Cancer. The reference gene serves as control for the integrity of the RNA and cDNA synthesis.

| Tube | Translocation     | Fusion               | Fw primer - Rev primer  | Flouochrome |     |
|------|-------------------|----------------------|-------------------------|-------------|-----|
| 1    | t(1;19)(q23;p13)  | TCF3-PBX1            | TCF3 ex16-PBX1 ex3      | FAM         | Cy5 |
|      | t(12;21)(p13;q22) | ETV6-RUNX1           | ETV6 ex5-RUNX1 ex4      | ROX         | Cy5 |
| 2    | t(15;17)(q24;q21) | PML-RARA (S, bcr3)   | PML ex3-RARA ex5        | FAM         | Cy5 |
|      | t(4;11)(q21;q23)  | MLL-AFF1             | MLL ex7-AFF1 ex9        | ROX         | Cy5 |
| 3    | t(9;22)(q34;q11)  | BCR-ABL1 m-bcr, P190 | BCR ex1-ABL1 ex3        | FAM         | Cy5 |
|      | t(15;17)(q24;q21) | PML-RARA (V, bcr2)   | PML ex6-RARA ex5        | ROX         | Cy5 |
| 4    | inv(16)(p13q22)   | CBFB-MYH11           | CBFB ex4-MYH11 ex34     | FAM         | Cy5 |
|      | t(8;21)(q22;q22)  | RUNX1-RUNX1T1        | RUNX1 ex6 - RUNX1T1 ex5 | ROX         | Cy5 |
| 5    | t(9;22)(q34;q31)  | BCR-ABL1 M-bcr, P210 | BCR ex12-ABL1 ex3       | FAM         | Cy5 |
|      | inv(16)(p13q22)   | CBFB-MYH11           | CBFB ex4-MYH11 ex30     | ROX         | Cy5 |
| 6    | t(9;22)(q34;q11)  | BCR-ABL1 μ-bcr, P230 | BCR ex19-ABL1 ex3       | FAM         | Cy5 |
|      | t(15;17)(q24;q21) | PML-RARA (L, bcr1)   | PML ex5-RARA ex5        | ROX         | Cy5 |
| 7    |                   |                      |                         |             |     |
| 8    | ABL1              | Reference gene       | ABL1 ex2-ABL1 ex3       | FAM         | Cy5 |

# Compatible with all major qPCR platforms

## **Format and storage of HemaVision® 7Q**

A HemaVision® 7Q kit contains 12 sets of ready-to-use cDNA and qPCR reaction tubes for 12 tests.

HemaVision® 7Q qPCR reaction tubes are available in three formats, WLP, WRP and CRP. The qPCR reaction tubes are delivered in 12 strips each containing 1x8 tubes. Adaptors makes HemaVision® 7Q compatible with most major qPCR instruments.

## **Fast visual results. Fast optimum treatment.**

A fast, accurate and focused screening process is of vital importance to a suspected leukemia patient. Run a HemaVision® 7Q and get a visual result from the amplification plot in just 4 hours. This ensures early and optimum treatment planning and a highly effective workflow.

## **7 Translocations. 40+ Breakpoints. In one test.**

The HemaVision® 7Q detects the 7 most frequent translocations involved in chronic and acute leukemia including alternative splice variants in 4 hours. The visual output from the amplification plot allows professionals to react with rapid precision in terms of treatment planning, while profiting from the cost- and labour-effective screening process.

HemaVision® 7Q is complex screening made simple and precise. With clear benefits for patients and professionals alike.

## **Want to learn more?**

Our team and distributors are always on hand to provide assistance, if you have questions about HemaVision® 7Q. To learn more and to find your nearest distributor, please contact us: [info@dna-diagnostic.com](mailto:info@dna-diagnostic.com).

Contact us on  
[info@dna-diagnostic.com](mailto:info@dna-diagnostic.com)  
**for more information**

## **Availability / questions**

Our team and distributors are always at hand to answer all your questions. Contact us to find your nearest HemaVision® 7Q partner.

CE-marked for in vitro diagnostic (CE-IVD)

## About us

DNA Diagnostic A/S was established in 1992 and is an ISO 13485:2012 certified world wide supplier of PCR based diagnostic systems.

Since 1999, we have developed and sold CE-marked diagnostic kits, and today DNA Diagnostic A/S is leading in assays offering the most comprehensive, fast and cost-effective screening tests with the highest level of service and support.

## **For more information, contact**

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