

# Mentype<sup>®</sup> Quality Sensor

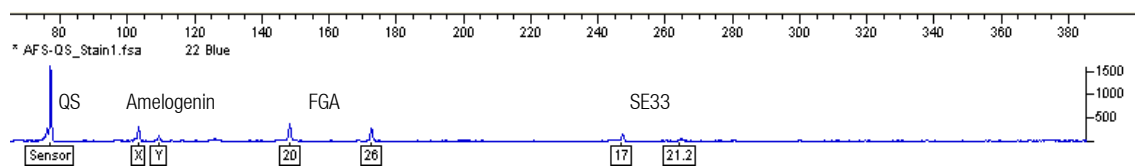
For fast and reliable control of DNA quality in forensic stains



Mentype<sup>®</sup> **Quality Sensor (QS)** is an internal PCR control indicating the progress of the Polymerase Chain Reaction (PCR). The PCR control gives additional information on the presence of PCR inhibitors and on the efficiency of the PCR reaction.

Bio type<sup>®</sup>

## Example of use: analysis of a forensic stain using Mentype<sup>®</sup> Triplex AFS<sup>QS</sup>



Electropherogram of Mentype<sup>®</sup> **Triplex AFS<sup>QS</sup>** (forensic stain containing partially degraded DNA) analysed on an ABI PRISM<sup>®</sup> 310 Genetic Analyzer with Genotyper<sup>®</sup> Software. The Quality Sensor fragment signal is shown at 77 bp

The example shows a difficult forensic stain which was analysed with Mentype<sup>®</sup> **Triplex AFS<sup>QS</sup>**. The test kit has been developed for screening of forensic stains. The Mentype<sup>®</sup> **Quality Sensor** signal is higher than 1500 relative fluorescence units (RFU) whereas allelic signals are significantly lower. Thus, the PCR reaction worked efficiently. Low peak heights of the alleles are caused most probably by low DNA concentration or DNA degradation. In this case the application of complex multiplex kits is not recommended, whereas triplex systems are advisable.

### Appearance

The fragment of Mentype<sup>®</sup> **Quality Sensor** and the alleles of the STR markers are visible.

The Mentype<sup>®</sup> **Quality Sensor** fragment is clearly visible, whereas no other allele of the STR markers can be found.

There is no signal at all.

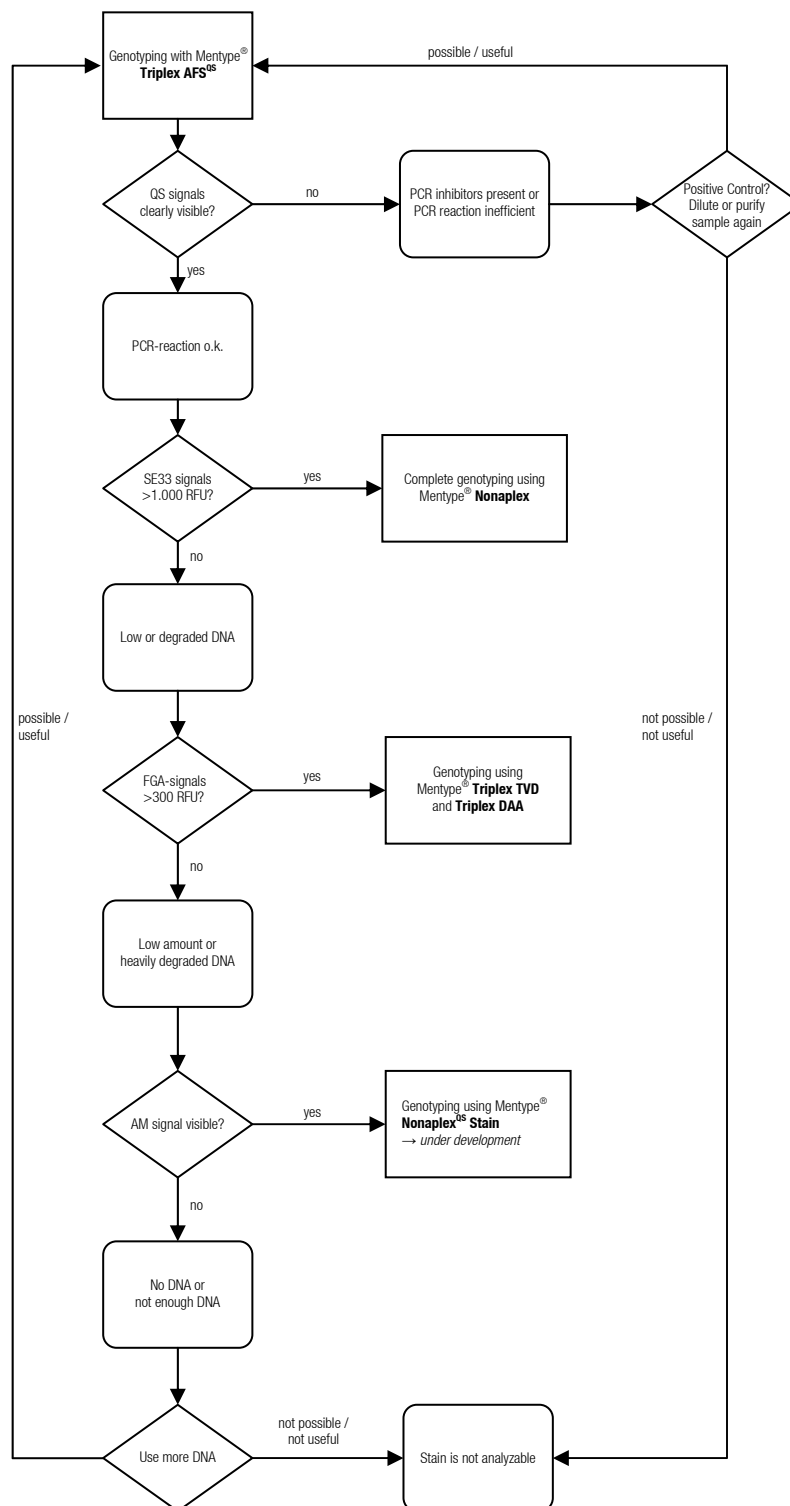
### Conclusion

Based on total peak height of the Mentype<sup>®</sup> **Quality Sensor** it is possible to check efficiency of the PCR.

The stain contains not enough DNA or the DNA is degraded. The PCR worked correctly, but the stain is not suitable for further analyses.

The stain contains PCR inhibitors or the PCR reaction was error prone. How about positive control?

# Mentype<sup>®</sup> Quality Sensor



The scheme gives definite information on degradation and quantity of the DNA as well as presence of PCR inhibitors and efficiency of the PCR reaction

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## Test Kits containing Mentype<sup>®</sup> Quality Sensor

Mentype<sup>®</sup> Nonaplex<sup>QS</sup>

Mentype<sup>®</sup> Nonaplex<sup>QS</sup> Twin

Mentype<sup>®</sup> Argus Y-MH<sup>QS</sup> / Argus Y-12<sup>QS</sup>

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