

CLAIMS

1. A nucleic acid control for a target nucleic acid sequence-specific Next Generation Sequencing-based diagnostic method, wherein said nucleic acid control comprises at least one nucleic acid control sequence that is different from the target nucleic acid sequence, and wherein said control comprises at least one wild-type nucleic acid sequence and at least one mutant of said wild-type sequence.
2. The nucleic acid control according to claim 1, wherein said nucleic acid control sequence is selected from non-human derived nucleic acids and viral nucleic acids.
3. The nucleic acid control according to claim 1 or 2, wherein said nucleic acid control sequence is selected from nucleic acids that are derived from Tobacco Mosaic Virus.
4. A nucleic acid control mixture for a target nucleic acid sequence-specific Next Generation Sequencing-based diagnostic method comprising at least two nucleic acid controls as defined in any one of claims 1 to 3 at a predetermined ratio.
5. A Next Generation Sequencing-based diagnostic method comprising extracting nucleic acid material from a sample and at least one control sample, wherein the control sample is prepared prior to extraction, further comprising subjecting the extracted nucleic acid material to a Next Generation Sequencing method, wherein the control sample comprises sample material supplemented with a nucleic acid control as defined in any one of claims 1 to 4.
6. The Next Generation Sequencing-based diagnostic method according to claim 4 or 5, wherein said method is suitable for the detection of the presence or absence of sequences derived from an infectious agent or from an oncogene.
7. The Next Generation Sequencing-based diagnostic method according to any one of claims 4 to 6, wherein the presence or absence of a target sequence derived from an infectious agent or from an oncogene and the presence of at least one nucleic acid

control sequence subsequent to the sequencing reaction are indicative of accomplished nucleic acid extraction from the samples.

8. The Next Generation Sequencing-based diagnostic method according to any one of claims 4 to 7, further comprising a contamination control.
9. The Next Generation Sequencing-based diagnostic method according to claim 8, wherein the contamination control comprises at least one nucleic acid control as defined in any one of claims 1 to 3, and wherein the contamination control does not comprise sample material.
10. The Next Generation Sequencing-based diagnostic method according to claim 8 or 9 comprising subjecting the contamination control to a target nucleic acid-specific sequencing reaction.
11. The Next Generation Sequencing-based diagnostic method according to any one of claims 8 to 10, comprising subjecting the contamination control to a target nucleic acid specific sequencing reaction, wherein the absence of detection of a target nucleic acid-specific sequence in the contamination control and the detection of the presence of a control nucleic acid-specific sequence are indicative of the absence of contamination.
12. The Next Generation Sequencing-based diagnostic method according to any one of claims 4 to 11, wherein said control nucleic acid is present in an amount of 0.1 to 10 fg subsequent to extraction of the nucleic acids from the samples.
13. The Next Generation Sequencing-based diagnostic method according to any one of claims 4 to 12, wherein the sample is a clinical sample derived from a human subject, and wherein the control nucleic acid is a plasmid comprising wild-type and/or mutant sequences of a non-human virus, selected from animal viruses not infecting humans, or plant viruses, or wherein the control nucleic acid has been artificially designed and has no equivalent in nature.