

New Claims Set

~~1. A method for detecting and/or typing and/or quantitation of the presence of human papillomavirus (HPV) type 18, 52, 59, 39, 51, 56, 66, 16, 45, 58, 31, 33 and 35 in a biological sample, the test comprising the following steps:~~

- ~~(i) amplification of a nucleic acid fragment of HPV in the presence of a DNA polymerase, forward PCR primer with an oligonucleotide sequence of SEQ ID NO:1, reverse PCR primer with an oligonucleotide sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 or SEQ ID NO:6, a probe with a oligonucleotide sequence selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19 and SEQ ID NO:20, labelled with a fluorescent dye and a quencher molecule, and an internal control;~~
- ~~(ii) detection of a change of fluorescence and determining HPV type.~~

~~2.1. A method according to claim 1, for detecting and/or typing and/or quantitation simultaneously the presence of human papillomavirus (HPV) type 18, 52, 59, 39, 51, 56, 66, 16, 45, 58, 31, 33 and 35 in a biological sample, the method comprising the following four parallel reactions:~~

Reaction 1- a) amplification of the nucleic acid fragments of HPV 18, 52 and 59 in the presence of

- (i) a nucleic acid polymerase
- (ii) a forward PCR primer with an oligonucleotide sequence of SEQ ID NO: 1,
- (iii) a reverse PCR primer with an oligonucleotide sequence of SEQ ID NO: 2,

Reaction 4- a) amplification of the nucleic acid fragments of HPV 31, 33, 35 and internal control in the presence of

- (i) a nucleic acid polymerase
- (i) a forward PCR primer with an oligonucleotide sequence of SEQ ID NO: 1,
- (ii) a reverse PCR primer with an oligonucleotide sequence of SEQ ID NO: 5,
- (iii) a probe with an oligonucleotide sequence of SEQ ID NO: 17, 18, 19 and 20, labelled with a fluorophore and a quencher molecule and
- (iv) internal control and

b) detection of a change of fluorescence the wavelength thereof determining the HPV type 31, 33, 35 and internal control.

~~3-2. A method according to claim 12, wherein said reactions are performed in parallel and in separate vials.~~

~~4. A method according to claims 1-3, wherein the four fluorophores are FAM, VIC, NED and ROX.~~

~~5. A method according to claims 1-3, wherein the internal control is HPV6.~~

~~6. Primers and probes according to claim 1, for use in the detection and/or typing and/or quantitation of HPV types 18, 52, 59, 39, 51, 56, 66, 16, 45, 58, 31, 33 and 35 present in a biological sample.~~

~~7. A diagnostic kit, comprising forward and reverse primers according to claim 1, probes for HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 66 according to claim 1 internal positive control and DNA polymerase for the use in a method according to claim 1.~~

~~8. The use of the diagnostic kit according to claim 7, for detection and/or~~

typing and/or quantitation of HPV type 18, 52, 59, 39, 51, 56, 66, 16, 45, 58, 31, 33 and 35 in a biological sample.