Supplementary Table S1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Virus | ID | Collection | Origin | plant species | sampling | Matrix |
| BPeMV | BN-4708 | DSMZ | Netherlands | *S. melongena* | before 1988 | leaf\*\*\* |
| CGMMV | PV-0375 | DSMZ | Germany | *Cucumis sp.* | Before 1992 | leaf |
| CGMMV | NIB V271 | at NIB maintained since 2012 (origin: NVWA, isolate 4073020-A) | Netherlands | *Cucumis sativus* | nd | leaf |
| CGMMV | NIB V320 | at NIB maintained since 2018 (origin: Murcia. Miguel Aranda) | Spain | *Cucumis sativus* | nd | leaf |
| Healthy | MR 5 | CREADC | Italy | *S.lycopersicum* |  | leaf |
| Healthy | SanoPep | CREADC | Italy | *C.annuum* |  | leaf |
| Healthy | MR5-s | CREADC | Italy | *S.lycopersicum* |  | seeds |
| Healthy | SanoPep-s | CREADC | Italy | *C.annuum* |  | seeds |
| ObPV | PV-1176 | DSMZ | Hungary | *C.annuum* | before 2015 | leaf\*\*\* |
| ORSV | PV-1048 | DSMZ | Germany | Orchis spp. | before 2007 | leaf\*\*\* |
| PaMMV | PV-0606 | DSMZ | Greece | *C.annuum* | before 2000 | leaf\*\*\* |
| PMMoV | PV-0165 | DSMZ | nd | *C.annuum* | before 2019 | leaf\*\*\* |
| RMV | PV-0145 | DSMZ | nd | *Plantago media* | before 1988 | leaf\*\*\* |
| SFBV | PV-1058 | DSMZ | nd | *Streptocarpus spp.* | before 2012 | leaf\*\*\* |
| SHMV | PV-0156 | DSMZ | nd | *Phaseolus vulgaris* | before 1988 | leaf\*\*\* |
| TMGMV | PV-0124\* | DSMZ | Italy | nd | before 1988 | leaf\*\*\* |
| TMV | NIB V037 | NIB | Slovenia | *S.lycopersicum* | 2000 | leaf |
| TMV | PV-0137 | DSMZ | Germany | nd | before 1988 | leaf\*\*\* |
| TMV | PV-1252 | DSMZ | nd | *Nicotian tabacum* | 2019 | leaf\*\*\* |
| ToBRFV | MR50-Tob-SIC22/19-T | CREADC | Italy | *S.lycopersicum* |  | leaf |
| ToBRFV | MR50-Tob-SIC22/19-T-s | CREADC | Italy | *S.lycopersicum* |  | seeds |
| ToBRFV | Tob-SIC22/19-P | CREADC | Italy | *C.annuum* |  | leaf |
| ToBRFV | Tob-SIC25/19-T | CREADC | Italy | S.lycopersicum |  | leaf |
| ToBRFV | Tob-Pie105/19-T | CREADC | Italy | S.lycopersicum |  | leaf |
| ToBRFV | Tob-Pie105/19-P | CREADC | Italy | *C.annuum* |  | leaf |
| ToBRFV | MR50 -10-5\*\* | CREADC | Italy | *S.lycopersicum* |  | leaf |
| ToBRFV | S21 | Volcani center | Israel | *S.lycopersicum* | nd | leaf |
| ToBRFV | S22 | Volcani center | Israel | *S.lycopersicum* | nd | leaf |
| ToMMV | S1 | IBMCP | Spain | *Nicotiana benthamiana* | 2019 | leaf |
| ToMMV | S2 | IBMCP | Spain | *Nicotiana benthamiana* | 2019 | leaf |
| ToMMV | PV-1267\* | DSMZ | California (USA) | *S.lycopersicum* | 2016 | leaf\*\*\* |
| ToMV | NIB V036 | NIB | Slovenia | *Petunia* | 2001 | leaf |
| ToMV | NIB V049 | NIB | Slovenia | nd | nd | leaf |
| ToMV | NIB V072 | NIB | Slovenia | *S.lycopersicum* | 2004 | leaf |
| ToMV | NIB V104 | NIB | Slovenia | *S.lycopersicum* | 2006 | leaf |
| ToMV | PV-0141 | DSMZ | France | *C.annuum* | before 1988 | leaf\*\*\* |
| YMoV | PV-0527 | DSMZ | Germany | *Impatiens spp.* | before 1988 | leaf\*\*\* |
| nd-not determined \*purchased independently by CREA and NIB  \*\*100.000 dilution  \*\*\*dry-lyophilized leaf material | | | | | | |

Supplementary Table S2

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | Singleplex (M&W) | Duplex | Duplex |  |
| ID | Plant species | Cultivar | Matrix | Origin | Date | ToBRFV status | ToBRFV | ToBFRV | ToMMV | virus detected by sanger sequencing of nested PCR product of Dovas et al. (2004) |
| 4 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 5 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 6 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 7 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 8 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 9 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 10 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 20 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 21 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 22 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 23 | *C.annuum* | nd | seeds | Italy | 03/2021 | negative | NA | NA | NA | nt |
| 33 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 34 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 35 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 36 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 37 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 38 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 39 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 40 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 50 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 51 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 52 | *S. lycopersicum* | nd | seeds | Italy | 05/2021 | negative | NA | NA | NA | nt |
| 53 | *S. lycopersicum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 54 | *S. lycopersicum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 55 | *S. lycopersicum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 56 | *S. lycopersicum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 60 | *C.annuum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 61 | *C.annuum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 62 | *C.annuum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 63 | *C.annuum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 64 | *S. lycopersicum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 65 | *S. lycopersicum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 66 | *S. lycopersicum* | nd | seeds | Italy | 07/2021 | negative | NA | NA | NA | nt |
| 67 | *S. lycopersicum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 68 | *C.annuum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 69 | *C.annuum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 72 | *C.annuum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 73 | *S. lycopersicum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 74 | *S. lycopersicum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 82 | *S. lycopersicum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 83 | *S. lycopersicum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 84 | *S. lycopersicum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 90 | *C.annuum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 91 | *C.annuum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| 92 | *C.annuum* | nd | seeds | Italy | 08/2021 | negative | NA | NA | NA | nt |
| D1/21 | *S. lycopersicum* | Fuji Pink | seeds | Brazil | 01/2021 | negative | NA | NA | NA | nt |
| D2/21 | *S. lycopersicum* | Sweet million | seeds | China | 01/2021 | negative | NA | NA | NA | nt |
| D3/21-A,B,C | *S. lycopersicum* | Val | seeds | Slovenia | 01/2021 | negative | NA\* | NA | NA | nt |
| D4/21 | *C.annuum* | Belladonna | seeds | India | 01/2021 | negative | NA | NA | NA | nt |
| D28/21 | *S. lycopersicum* | Dyno F1 | seeds | Thailand | 02/2021 | negative | NA | NA | NA | nt |
| D41/21 | *S. lycopersicum* | Runner F1 | seeds | nd | 03/2021 | negative | NA | NA\* | NA | nt |
| D43/21-A,B,C | *S. lycopersicum* | Begunec | seeds | Slovenia | 03/2021 | negative | NA\* | NA\* | NA | nt |
| D76/21-A,B,C | *C.annuum* | Alpina | seeds | Serbia | 03/2021 | negative | NA | NA | NA | nt |
| D191/21-A,B,C | *S. lycopersicum* | Sweetheart | seeds | China | 04/2021 | negative | NA | NA | NA | nt |
| D194/21-A,B,C | *C.annuum* | Karola | seeds | China | 04/2021 | negative | 38.2\*\* | NA | NA | nt |
| D195/21-A,B,C | *C.annuum* | Stef | seeds | China | 04/2021 | negative | NA\* | NA | NA | nt |
| D196/21-A,B,C | *C.annuum* | Dumbo | seeds | China | 04/2021 | negative | NA | NA | NA | nt |
| D198/21-A,B,C | *C.annuum* | Dracula | seeds | China | 04/2021 | negative | 35.8 | NA\* | NA | nt |
| D261/21-A,B,C | *S. lycopersicum* | Coure di bue | seeds | China | 04/2021 | negative | NA | NA | NA\* | nt |
| D262/21-A,B | *C.annuum* | Cayenna | seeds | China | 04/2021 | negative | NA | NA | NA | nt |
| D263/21-A,B,C | *S. lycopersicum* | Pantano | seeds | China | 04/2021 | negative | NA | NA\* | NA\* | nt |
| D264/21-A,B,C | *C.annuum* | Corno giallo | seeds | China | 04/2021 | negative | NA | NA | NA\* | nt |
| D278/21-A,B,C | *S. lycopersicum* | Marmande | seeds | China | 04/2021 | negative | 37.1\*\* | 36.4\*\* | NA | nt |
| D279/21-A,B | *C.annuum* | Quadrato d'Asti giallo | seeds | China | 04/2021 | negative | NA | NA\* | NA | nt |
| D280/21-A,B | *C.annuum* | Soroksari | seeds | China | 04/2021 | negative | NA | NA | NA | nt |
| D281/21-A,B,C | *S. lycopersicum* | Red cherry | seeds | China | 04/2021 | negative | NA | NA | NA\* | nt |
| D308/21-A,B,C | *S. lycopersicum* | Ghittia | seeds | China | 05/2021 | negative | NA | NA | NA\* | nt |
| D311/21-A,B,C | *S. lycopersicum* | Lillagro | seeds | China | 05/2021 | negative | NA | NA | NA\* | nt |
| D313/21-A,B,C | *S. lycopersicum* | Corina | seeds | China | 05/2021 | negative | 38.3\*\* | 38.7\*\* | NA | nt |
| D316/21-A,B,C | *S. lycopersicum* | Henriet | seeds | China | 05/2021 | negative | NA\* | NA\* | NA\* | nt |
| D317/21-A,B,C | *C.annuum* | Andreika | seeds | China | 05/2021 | negative | NA | NA | NA\* | nt |
| D318/21-A,B,C | *C.annuum* | Barbara | seeds | China | 05/2021 | negative | NA | NA | NA | nt |
| D319/21-A,B,C | *C.annuum* | Splendid | seeds | China | 05/2021 | negative | NA\* | NA | NA | nt |
| D320/21-A,B,C | *C.annuum* | Vlad | seeds | China | 05/2021 | negative | NA\* | NA | NA | nt |
| D321/21-A,B,C | *C.annuum* | Mircea | seeds | China | 05/2021 | negative | NA | NA | NA | nt |
| D322/21-A,B,C | *C.annuum* | California Wonder | seeds | China | 05/2021 | negative | NA | NA\* | NA\* | nt |
| D325/21-A,B,C | *S. lycopersicum* | Raluca | seeds | China | 05/2021 | negative | NA\* | NA\* | NA\* | nt |
| D327/21-A,B,C | *S. lycopersicum* | Lillagro | seeds | China | 05/2021 | negative | 37.7\*\* | NA\* | NA\* | nt |
| D329/21-A,B,C | *C.annuum* | Karola | seeds | China | 05/2021 | negative | 34.8 | NA\* | NA | nt |
| D335/21-A,B,C | *C.annuum* | Vlad | seeds | China | 05/2021 | negative | 36 | NA | NA | nt |
| D979/21-A,B,C | *S. lycopersicum* | Factor F1 | seeds | nd | 08/2021 | negative | NA\* | NA | NA | nt |
| D1364/21 | *S. lycopersicum* | Toivo F1 | seeds | nd | 10/2021 | negative | NA | NA | NA | nt |
| D1388/21 | *S. lycopersicum* | Vitellio | seeds | nd | 10/2021 | negative | NA | NA | NA | nt |
| D1365/21-A,B,C | *S. lycopersicum* | Tonatico | seeds | nd | 10/2021 | negative | NA\* | NA | 37.7\*\* | no nested PCR product obtained |
| D324/21-A,B,C | *S. lycopersicum* | Elisabeta | seeds | China | 05/2021 | negative | NA\* | NA\* | 37.0\*\* | ToMV confirmed |
| D201/21-A,B,C | *S. lycopersicum* | Ghittia | seeds | China | 04/2021 | negative | NA\* | NA\* | 36.8 | no nested PCR product obtained |
| D310/21-A,B,C | *S. lycopersicum* | Ideal | seeds | China | 05/2021 | negative | NA\* | NA\* | 36.6\*\* | ToMV confirmed |
| D202/21-A,B,C | *S. lycopersicum* | Drops | seeds | China | 04/2021 | negative | NA\* | NA\* | 36.2\*\* | ToMV suspected |
| D309/21-A,B,C | *S. lycopersicum* | Unibac | seeds | China | 05/2021 | negative | NA | NA | 36.0\*\* | ToMV confirmed |
| D323/21-A,B,C | *S. lycopersicum* | Amalia | seeds | China | 05/2021 | negative | NA\* | NA\* | 35.8 | TMGMV suspected |
| D333/21-A,B,C | *S. lycopersicum* | Elisabeta | seeds | China | 05/2021 | negative | NA | NA\* | 35.6 | mix infection with different tobamoviruses suspected |
| D326/21-A,B,C | *S. lycopersicum* | Buzau | seeds | China | 05/2021 | negative | 37.3\*\* | 37.9\*\* | 31.7 | mix infection with different tobamoviruses suspected |
| D200/21-A,B,C | *S. lycopersicum* | Raluca | seeds | China | 04/2021 | negative | 36.9 | 35.2 | 29.7 | mix infection with ToMMV and ToMV suspected |
| D328/21-A,B,C | *S. lycopersicum* | Chiquita pot | seeds | China | 05/2021 | negative | 37.8 | 36.6\*\* | 29 | ToMMV confirmed |
| D334/21-A,B,C | *S. lycopersicum* | Ruxandra | seeds | China | 05/2021 | negative | 38.5\*\* | NA | 27.7 | ToMMV confirmed |
| D314/21-A,B,C | *S. lycopersicum* | Sandybelle | seeds | China | 05/2021 | negative | NA\* | NA\* | 27.6 | ToMMV confirmed |
| D315/21-A,B,C | *S. lycopersicum* | Imola | seeds | China | 05/2021 | negative | NA\* | NA\* | 26.2 | ToMMV confirmed |
| D332/21-A,B,C | *S. lycopersicum* | Amalia | seeds | China | 05/2021 | negative | 36.4\*\* | 36.0\*\* | 23.1 | ToMMV confirmed |
| D192/21-A,B,C | *S. lycopersicum* | Silvia | seeds | China | 04/2021 | positive | 31.3 | 31.9 | NA | nt |
| D193/21-3 | *S. lycopersicum* | Drops | seeds | China | 04/2021 | positive | 32.6 | 31.6 | NA | nt |
| D197/21-A,B,C | *C.annuum* | Barbara | seeds | China | 04/2021 | positive | 29.2 | 29 | NA | nt |
| D199/21-A,B,C | *C.annuum* | Pintea | seeds | China | 04/2021 | positive | 17.2 | 16.1 | NA | nt |
| D312/21-1 | *S. lycopersicum* | Chiquita pot | seeds | China | 05/2021 | positive | 32.1 | 31.7 | NA | nt |
| D330/21-A,B,C | *C.annuum* | Galben superior | seeds | China | 05/2021 | positive | 32.7 | 33.8 | NA | nt |
| D330/21-2,4 | *C.annuum* | Galben superior | seeds | China | 05/2021 | positive | 31.7 | 32.5 | NA\* | nt |
| D331/21-4 | *C.annuum* | Stef | seeds | China | 05/2021 | positive | 31.9 | 33 | NA\* | nt |
|  |  |  |  |  |  |  |  |  |  |  |
| Each sample was divided into three subsamples, each of which was tested in 2-3 tehnical repetitions. The average Cq values of all parallels are indicated or marked as NA if no exponential amplification curves were observed. | | | | | | | | | | | |
| ToBRFV status was determined based on results of both real-time RT-PCRs recomended in EPPO standard PM7/146(1) | | | | | | | | | | | |
| nd - not determined; nt - not tested; \*one up to half parallels with Cq between 34 and 40; \*\*one up to half parallels with no exponential amplification curve | | | | | | | | | | | |

Supplementary Table S3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Isolate** | **Host** | **Origin** | **Sequencing methodology** | **Date of collection** | **Reference** |
| MN654021\_ToMMV\_19\_02305 | *C. annuum* | NL | Sanger HTS Illumina | 2020 | Australas. Plant Dis. Notes 15 (1), 8 (2020) |
| MH128145\_ToMMV\_CpB1 | *S.lycopersicum* | BR | Illumina | 1992 | Nagai,A. et al., 2018 |
| MG171192\_MP\_ToMMV\_Hainan | *S.lycopersicum* | CN | Sanger | 2016 | Zhan,B. et al., 2017 |
| KX898034\_ToMMV\_CA16\_01 | *S.lycopersicum* | USA | Sanger Illumina | 2016 | Sui,X. Et al., 2017 |
| KX898033\_ToMMV\_SC13\_05 | *S.lycopersicum* | USA | Sanger Illumina | 2013 | Sui,X. Et al., 2018 |
| KR824951\_ToMMV\_TiLhaLJ | *C. frutescens* | Tibet | nd | 2013 | Li et al., 2016 |
| KR824950\_ToMMV\_YYMLJ | *C. annuum* | CN Yunnan | nd | 2013 | Li et al., 2017 |
| KT810183\_ToMMV\_NY\_13 | *S.lycopersicum* | USA-NY | Illumina | 2013 | Padmanabhan,C. et al., 2015 |
| KP202857\_ToMMV\_10\_100 | *S.lycopersicum* | USA-FL | Sanger IonTorrent | 2010 | Fillmer,K et al., 2015 |
| MW582804\_ToMMV  DSMZ\_PV\_1267 | *S.lycopersicum* | USA-california | Illumina | nd | Knierim,D et al., 2021 |
| MN853592\_ToMMV\_LN | *S.lycopersicum* | CN Liaoning | Sanger | 2015 | Tu and Ji 2019 |
| MH381817\_ToMMV\_HN | *S.lycopersicum* | CN | nd | nd | Liu e Zhou 2018 |
| NC\_022230\_MP\_ToMMV\_MX5 | *S.lycopersicum* | MX | sanger Illumina | 2009 | Li et al., 2013 |
| KU594507\_ToMMV\_SP | *S.lycopersicum* | SP | Sanger | 2015 | Ambros,S et al., 2017 |
| nd-not determined |  |  |  |  |  |

Supplementary Table S4

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **CREA** | | **NIB** | |
|  | sample | ToBRFV status | Single (M&W) | Duplex | Single (M&W) | Duplex |
| **TOMATO sample set** | 1 | negative | NA | nt | NA | NA |
|  |  | 38,4 | nt | NA | NA |
| 2 | positive | 20,5 | 18,9 | 20,1 | 20,0 |
|  |  | 20,5 | 19,3 | 20,2 | 20,1 |
| 3 | negative | NA | NA | NA | NA |
|  |  | NA | NA | NA | NA |
| 4 | positive | 26,2 | 24,9 | 20,1 | 20,2 |
|  |  | 26,2 | 24,9 | 20,1 | 20,3 |
| 5 | positive | 26,0 | 24,7 | 20,3 | 20,2 |
|  |  | 26,0 | 24,9 | 20,3 | 20,4 |
| 6 | positive | 20,7 | 19,5 | 24,0 | 24,1 |
|  |  | 20,5 | 19,4 | 24,1 | 24,1 |
| 7 | positive | 32,0 | 30,8 | 20,6 | 20,5 |
|  |  | 32,5 | 30,3 | 20,7 | 20,4 |
| 8 | positive | 26,5 | 25,2 | 22,1 | 21,1 |
|  |  | 26,7 | 25,1 | 22,1 | 22,0 |
| 9 | positive | 22,9 | 21,7 | 21,2 | 21,2 |
|  |  | 22,9 | 21,4 | 21,4 | 21,4 |
| 10 | positive | 26,6 | 25,4 | 21,8 | 22,0 |
|  |  | 26,7 | 25,2 | 21,9 | 21,9 |
| 11 | positive | 29,6 | 27,4 | 24,9 | 25,2 |
|  |  | 29,5 | 27,0 | 24,9 | 25,1 |
| 12 | positive | 18,8 | 18,4 | 20,7 | 21,0 |
|  |  | 18,8 | 18,9 | 20,9 | 21,0 |
| 13 | negative | 38,3 | NA | NA | NA |
|  |  | NA | NA | NA | NA |
| 14 | positive | 18,4 | 17,4 | 23,7 | 23,8 |
|  |  | 18,3 | 17,7 | 23,7 | 23,9 |
| 15 | positive | 24,9 | 23,7 | 21,9 | 21,9 |
|  |  | 25,1 | 23,8 | 22,0 | 22,1 |
| 16 | negative | NA | NA | NA | NA |
|  |  | NA | NA | NA | NA |
| 17 | positive | 30,8 | 29,4 | 22,9 | 23,1 |
|  |  | 30,7 | 29,1 | 22,9 | 23,1 |
| 18 | positive | 23,3 | 22,1 | 20,3 | 20,4 |
|  |  | 23,3 | 22,1 | 20,2 | 20,4 |
| 19 | positive | 29,3 | 27,7 | 22,6 | 22,6 |
|  |  | 29,7 | 27,8 | 22,7 | 22,7 |
| 20 | positive | 29,3 | 27,7 | 27,4 | 27,8 |
|  |  | 29,6 | 28,0 | 27,4 | 27,6 |
| 21 | positive | 27,5 | 26,1 | 29,5 | 30,0 |
|  |  | 27,5 | 26,0 | 29,8 | 30,0 |
| 22 | positive | 19,6 | 18,4 | 22,6 | 22,4 |
|  |  | 19,8 | 18,5 | 22,5 | 22,4 |
| 23 | positive | 22,7 | 21,4 | 20,4 | 20,3 |
|  |  | 22,5 | 21,4 | 20,6 | 20,3 |
| 24 | negative | NA | NA | NA | NA |
|  |  | NA | NA | NA | NA |
| 25 | positive | 26,0 | 25,3 | 25,1 | 24,5 |
|  |  | 25,8 | 25,2 | 25,1 | 24,6 |
| 26 | positive | 32,0 | 30,7 | 26,9 | 26,7 |
|  |  | 31,8 | 30,6 | 26,7 | 26,7 |
| 27 | positive | 33,2 | 32,2 | 32,5 | 33,0 |
|  |  | 33,7 | 32,9 | 32,4 | 33,0 |
| 28 | negative | NA | NA | NA | NA |
|  |  | 36,8 | NA | NA | NA |
| 29 | positive | 35,2 | 33,7 | 27,9 | 28,1 |
|  |  | 35,0 | NA | 28,2 | 28,1 |
| 30 | positive | 28,6 | 26,9 | 26,3 | 26,5 |
|  |  | 28,5 | 27,1 | 26,4 | 26,5 |
| **PEPPER sample set** | 31 | negative | NA | NA | 35,0 | NA |
|  |  | NA | NA | NA | NA |
| 32 | positive | 31,6 | 30,0 | 29,5 | 29,0 |
|  |  | 31,7 | 30,1 | 28,9 | 29,0 |
| 33 | positive | 32,3 | 30,3 | 28,9 | 29,1 |
|  |  | 32,1 | 30,3 | 29,4 | 28,8 |
| 34 | negative | 38,3 | NA | NA | NA |
|  |  | 38,8 | NA | NA | 36,6 |
| 35 | negative | 38,3 | NA | NA | NA |
|  |  | NA | NA | NA | NA |
| 36 | positive | 32,0 | 30,1 | 28,5 | 28,6 |
|  |  | 31,6 | 30,1 | 28,4 | 28,6 |
| 37 | positive | 33,3 | 33,1 | 28,6 | 28,8 |
|  |  | 34,3 | 33,0 | 28,6 | 28,7 |
| 38 | negative | 37,3 | NA | NA | NA |
|  |  | NA | NA | 36,1 | NA |
| 39 | positive | 33,5 | 32,9 | 29,6 | 29,0 |
|  |  | 34,0 | 32,7 | 29,0 | 29,3 |
| 40 | negative | NA | NA | NA | NA |
|  |  | NA | NA | NA | NA |