

FAO World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD)

Genotyping Report

Report Date for this Batch: 3 March 2014

FMDV type O

Country: Nepal

Period: 2012-2014

No. of samples: 23

BATCH: WRLFMD/2014/00003



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/4/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2012/13(33) 4Np	
Location: Rupandehi, Nepal	Topotype: ME-SA
Date collected: 28/08/2012	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP12-04.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 12/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/6/2012	NEP12-06	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/IND/69/2012* (KC506524)	IND12069	639	636	0	99.53	0.47	ME-SA	Ind-2001d
3	O/IND/70/2012* (KC506525)	IND12070	639	636	0	99.53	0.47	ME-SA	Ind-2001d
4	O/IND/95/2012* (KC506526)	IND12095	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/BHU/12/2012	BHU12-12	639	635	0	99.37	0.63	ME-SA	Ind-2001d
6	O/IND/141/2012* (KC506527)	IND12141	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/IND/150/2012* (KC506528)	IND12150	639	633	0	99.06	0.94	ME-SA	Ind-2001d
8	O/IND/171/2012* (KC506529)	IND12171	639	633	0	99.06	0.94	ME-SA	Ind-2001d
9	O/IND/193/2012* (KC506530)	IND12193	639	631	0	98.75	1.25	ME-SA	Ind-2001d
10	O/NEP/21/2012	NEP12-21	639	631	0	98.75	1.25	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	604	0	94.52	5.48	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	594	0	92.96	7.04	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	590	0	92.33	7.67	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	574	0	90.25	9.75	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{FAR-09}
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	567	1	88.87	11.13	ME-SA	Irn-2001
7	O/UKG/35/2001 (AJ539141)	UKG01-35	639	567	0	88.73	11.27	ME-SA	PanAsia
8	O/PAK/16/2003 (DQ165068)	PAK03-16	639	566	0	88.58	11.42	ME-SA	Pak-98
9	O/IRN/8/2005	IRN05-08	639	565	0	88.42	11.58	ME-SA	PanAsia-2
10	O/IRN/18/2010	IRN10-18	639	563	0	88.11	11.89	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/6/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2012/13(65) 6Np	
Location: Dhading, Nepal	Topotype: ME-SA
Date collected: 24/09/2012	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP12-06.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Buffalo	No. of Nt determined: 639
Material used: BTy1 12/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/4/2012	NEP12-04	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/IND/69/2012* (KC506524)	IND12069	639	636	0	99.53	0.47	ME-SA	Ind-2001d
3	O/IND/70/2012* (KC506525)	IND12070	639	636	0	99.53	0.47	ME-SA	Ind-2001d
4	O/IND/95/2012* (KC506526)	IND12095	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/BHU/12/2012	BHU12-12	639	635	0	99.37	0.63	ME-SA	Ind-2001d
6	O/IND/141/2012* (KC506527)	IND12141	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/IND/150/2012* (KC506528)	IND12150	639	633	0	99.06	0.94	ME-SA	Ind-2001d
8	O/IND/171/2012* (KC506529)	IND12171	639	633	0	99.06	0.94	ME-SA	Ind-2001d
9	O/IND/193/2012* (KC506530)	IND12193	639	631	0	98.75	1.25	ME-SA	Ind-2001d
10	O/NEP/21/2012	NEP12-21	639	631	0	98.75	1.25	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	604	0	94.52	5.48	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	594	0	92.96	7.04	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	590	0	92.33	7.67	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	574	0	90.25	9.75	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{FAR-09}
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	567	1	88.87	11.13	ME-SA	Irn-2001
7	O/UKG/35/2001 (AJ539141)	UKG01-35	639	567	0	88.73	11.27	ME-SA	PanAsia
8	O/PAK/16/2003 (DQ165068)	PAK03-16	639	566	0	88.58	11.42	ME-SA	Pak-98
9	O/IRN/8/2005	IRN05-08	639	565	0	88.42	11.58	ME-SA	PanAsia-2
10	O/IRN/18/2010	IRN10-18	639	563	0	88.11	11.89	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/10/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2012/13(76) 9Np	
Location: Lalitpur, Nepal	Topotype: ME-SA
Date collected: 27/11/2012	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP12-10.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 12/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/11/2012	NEP12-11	639	638	0	99.84	0.16	ME-SA	Ind-2001d
2	O/NEP/13/2012	NEP12-13	639	638	0	99.84	0.16	ME-SA	Ind-2001d
3	O/IND127/2013* (PD-FMD)	IND13-AC	639	628	0	98.28	1.72	ME-SA	Ind-2001d
4	O/IND50/2013* (PD-FMD)	IND13-AA	639	627	0	98.12	1.88	ME-SA	Ind-2001d
5	O/IND52/2013* (PD-FMD)	IND13-AB	639	627	0	98.12	1.88	ME-SA	Ind-2001d
6	O/NEP/16/2012	NEP12-16	639	627	0	98.12	1.88	ME-SA	Ind-2001d
7	O/BHU/1/2013	BHU13-01	639	625	0	97.81	2.19	ME-SA	Ind-2001d
8	O/IND205/2013* (PD-FMD)	IND13-AF	639	623	0	97.50	2.50	ME-SA	Ind-2001d
9	O/LIB/16/2013	LIB13-16	639	623	0	97.50	2.50	ME-SA	Ind-2001d
10	O/NEP/2/2014	NEP14-02	639	623	0	97.50	2.50	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	618	0	96.71	3.29	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	589	0	92.18	7.82	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	588	0	92.02	7.98	ME-SA	Ind-2001a
4	O/IRN/31/2009	IRN09-31	639	577	0	90.30	9.70	ME-SA	PanAsia-2 ^{FAR-09}
5	O/UAE/4/2008	UAE08-04	636	574	0	90.25	9.75	ME-SA	Ind-2001c
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	573	1	89.81	10.19	ME-SA	Irn-2001
7	O/IRN/8/2005	IRN05-08	639	572	0	89.51	10.49	ME-SA	PanAsia-2
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	572	0	89.51	10.49	ME-SA	PanAsia
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	571	0	89.36	10.64	ME-SA	PanAsia-2 ^{TER-08}
10	O/IRN/18/2010	IRN10-18	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/11/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2012/13(77) 10Np	
Location: Lalitpur, Nepal	Topotype: ME-SA
Date collected: 27/11/2012	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP12-11.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 12/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/13/2012	NEP12-13	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/NEP/10/2012	NEP12-10	639	638	0	99.84	0.16	ME-SA	Ind-2001d
3	O/IND127/2013* (PD-FMD)	IND13-AC	639	629	0	98.44	1.56	ME-SA	Ind-2001d
4	O/IND50/2013* (PD-FMD)	IND13-AA	639	628	0	98.28	1.72	ME-SA	Ind-2001d
5	O/IND52/2013* (PD-FMD)	IND13-AB	639	628	0	98.28	1.72	ME-SA	Ind-2001d
6	O/NEP/16/2012	NEP12-16	639	628	0	98.28	1.72	ME-SA	Ind-2001d
7	O/BHU/1/2013	BHU13-01	639	626	0	97.97	2.03	ME-SA	Ind-2001d
8	O/IND205/2013* (PD-FMD)	IND13-AF	639	624	0	97.65	2.35	ME-SA	Ind-2001d
9	O/LIB/16/2013	LIB13-16	639	624	0	97.65	2.35	ME-SA	Ind-2001d
10	O/SAU/6/2013	SAU13-06	639	624	0	97.65	2.35	ME-SA	Ind-2001d

Most Closely Related Reference Viruses

(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	619	0	96.87	3.13	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	588	0	92.02	7.98	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	587	0	91.86	8.14	ME-SA	Ind-2001a
4	O/IRN/31/2009	IRN09-31	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{FAR-09}
5	O/UAE/4/2008	UAE08-04	636	573	0	90.09	9.91	ME-SA	Ind-2001c
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	572	1	89.66	10.34	ME-SA	Iran-2001
7	O/IRN/8/2005	IRN05-08	639	571	0	89.36	10.64	ME-SA	PanAsia-2
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	571	0	89.36	10.64	ME-SA	PanAsia
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{TER-08}
10	O/IRN/18/2010	IRN10-18	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: NEP/13/2012 Batch No: WRLFMD/2014/00003 Sender Ref: 2012/13(73) 47Np Location: Lalitpur, Nepal Date collected: 27/11/2012 Date received by WRLFMD: 05/02/2014 Date received for sequencing: 24/02/2014 Species: Cattle Material used: BTy1 12/02/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 01/03/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: Ind-2001d Sequence filename: NEP12-13.SEQ Date sequence last updated: 26/02/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3799 Min. no. of nt for comparison: 600 Total turn-around time: 24 days Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/11/2012	NEP12-11	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/NEP/10/2012	NEP12-10	639	638	0	99.84	0.16	ME-SA	Ind-2001d
3	O/IND127/2013* (PD-FMD)	IND13-AC	639	629	0	98.44	1.56	ME-SA	Ind-2001d
4	O/IND50/2013* (PD-FMD)	IND13-AA	639	628	0	98.28	1.72	ME-SA	Ind-2001d
5	O/IND52/2013* (PD-FMD)	IND13-AB	639	628	0	98.28	1.72	ME-SA	Ind-2001d
6	O/NEP/16/2012	NEP12-16	639	628	0	98.28	1.72	ME-SA	Ind-2001d
7	O/BHU/1/2013	BHU13-01	639	626	0	97.97	2.03	ME-SA	Ind-2001d
8	O/IND205/2013* (PD-FMD)	IND13-AF	639	624	0	97.65	2.35	ME-SA	Ind-2001d
9	O/LIB/16/2013	LIB13-16	639	624	0	97.65	2.35	ME-SA	Ind-2001d
10	O/SAU/6/2013	SAU13-06	639	624	0	97.65	2.35	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	619	0	96.87	3.13	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	588	0	92.02	7.98	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	587	0	91.86	8.14	ME-SA	Ind-2001a
4	O/IRN/31/2009	IRN09-31	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{FAR-09}
5	O/UAE/4/2008	UAE08-04	636	573	0	90.09	9.91	ME-SA	Ind-2001c
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	572	1	89.66	10.34	ME-SA	Irn-2001
7	O/IRN/8/2005	IRN05-08	639	571	0	89.36	10.64	ME-SA	PanAsia-2
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	571	0	89.36	10.64	ME-SA	PanAsia
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{TER-08}
10	O/IRN/18/2010	IRN10-18	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/16/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2012/13(94) 13Np	
Location: Lalitpur, Nepal	Topotype: ME-SA
Date collected: 11/12/2012	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP12-16.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 15/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IND50/2013* (PD-FMD)	IND13-AA	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BHU/1/2013	BHU13-01	639	637	0	99.69	0.31	ME-SA	Ind-2001d
3	O/IND127/2013* (PD-FMD)	IND13-AC	639	628	0	98.28	1.72	ME-SA	Ind-2001d
4	O/NEP/11/2012	NEP12-11	639	628	0	98.28	1.72	ME-SA	Ind-2001d
5	O/NEP/13/2012	NEP12-13	639	628	0	98.28	1.72	ME-SA	Ind-2001d
6	O/NEP/10/2012	NEP12-10	639	627	0	98.12	1.88	ME-SA	Ind-2001d
7	O/IND205/2013* (PD-FMD)	IND13-AF	639	625	0	97.81	2.19	ME-SA	Ind-2001d
8	O/IND52/2013* (PD-FMD)	IND13-AB	639	625	0	97.81	2.19	ME-SA	Ind-2001d
9	O/UAE/1/2014	UAE14-01	639	625	0	97.81	2.19	ME-SA	Ind-2001d
10	O/UAE/2/2014	UAE14-02	639	625	0	97.81	2.19	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	618	0	96.71	3.29	ME-SA	Ind-2001d
2	O/KUW/3/97 (DQ164904)	KUW97-03	639	590	0	92.33	7.67	ME-SA	Ind-2001a
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	589	0	92.18	7.82	ME-SA	Ind-2001b
4	O/UAE/4/2008	UAE08-04	636	580	0	91.19	8.81	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	573	0	89.67	10.33	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	570	0	89.20	10.80	ME-SA	PanAsia
7	O/IRN/61/2001 (DQ164896)	IRN01-61	638	569	1	89.18	10.82	ME-SA	Irn-2001
8	O/IRN/18/2010	IRN10-18	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{BAL-09}
9	O/IRN/8/2005	IRN05-08	639	568	0	88.89	11.11	ME-SA	PanAsia-2
10	O/PAK/16/2010	PAK10-16	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/21/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2012/13(101) 15Np	
Location: Rautahat, Nepal	Topotype: ME-SA
Date collected: 12/12/2012	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP12-21.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Buffalo	No. of Nt determined: 639
Material used: BTy1 15/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IND/69/2012* (KC506524)	IND12069	639	634	0	99.22	0.78	ME-SA	Ind-2001d
2	O/IND/70/2012* (KC506525)	IND12070	639	634	0	99.22	0.78	ME-SA	Ind-2001d
3	O/IND/95/2012* (KC506526)	IND12095	639	634	0	99.22	0.78	ME-SA	Ind-2001d
4	O/BHU/12/2012	BHU12-12	639	633	0	99.06	0.94	ME-SA	Ind-2001d
5	O/IND/141/2012* (KC506527)	IND12141	639	633	0	99.06	0.94	ME-SA	Ind-2001d
6	O/IND/150/2012* (KC506528)	IND12150	639	633	0	99.06	0.94	ME-SA	Ind-2001d
7	O/IND/171/2012* (KC506529)	IND12171	639	631	0	98.75	1.25	ME-SA	Ind-2001d
8	O/NEP/4/2012	NEP12-04	639	631	0	98.75	1.25	ME-SA	Ind-2001d
9	O/NEP/6/2012	NEP12-06	639	631	0	98.75	1.25	ME-SA	Ind-2001d
10	O/IND/193/2012* (KC506530)	IND12193	639	629	0	98.44	1.56	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	602	0	94.21	5.79	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	590	0	92.33	7.67	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	586	0	91.71	8.29	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	573	0	90.09	9.91	ME-SA	Ind-2001c
5	O/UKG/35/2001 (AJ539141)	UKG01-35	639	566	0	88.58	11.42	ME-SA	PanAsia
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	564	1	88.40	11.60	ME-SA	Irn-2001
7	O/IRN/31/2009	IRN09-31	639	564	0	88.26	11.74	ME-SA	PanAsia-2 ^{FAR-09}
8	O/PAK/16/2003 (DQ165068)	PAK03-16	639	562	0	87.95	12.05	ME-SA	Pak-98
9	O/IRN/18/2010	IRN10-18	639	560	0	87.64	12.36	ME-SA	PanAsia-2 ^{BAL-09}
10	O/IRN/8/2005	IRN05-08	639	560	0	87.64	12.36	ME-SA	PanAsia-2

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/3/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(73) 19Np	
Location: Kathmandu, Nepal	Topotype: ME-SA
Date collected: 22/10/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-03.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 15/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IND205/2013* (PD-FMD)	IND13-AF	639	638	0	99.84	0.16	ME-SA	Ind-2001d
2	O/IND189/2013* (PD-FMD)	IND13-AE	639	637	0	99.69	0.31	ME-SA	Ind-2001d
3	O/IND219/2013* (PD-FMD)	IND13-AG	639	637	0	99.69	0.31	ME-SA	Ind-2001d
4	O/IND222/2013* (PD-FMD)	IND13-AH	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/NEP/11/2013	NEP13-11	639	636	0	99.53	0.47	ME-SA	Ind-2001d
6	O/NEP/12/2013	NEP13-12	639	636	0	99.53	0.47	ME-SA	Ind-2001d
7	O/NEP/2/2014	NEP14-02	639	636	0	99.53	0.47	ME-SA	Ind-2001d
8	O/NEP/6/2014	NEP14-06	639	636	0	99.53	0.47	ME-SA	Ind-2001d
9	O/UAE/1/2014	UAE14-01	639	636	0	99.53	0.47	ME-SA	Ind-2001d
10	O/UAE/2/2014	UAE14-02	639	636	0	99.53	0.47	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	615	0	96.24	3.76	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	590	0	92.33	7.67	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	589	0	92.18	7.82	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	574	0	89.83	10.17	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/PAK/16/2003 (DQ165068)	PAK03-16	639	568	0	88.89	11.11	ME-SA	Pak-98

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/6/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(103) 39Np	
Location: Kavre, Nepal	Topotype: ME-SA
Date collected: 06/11/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-06.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 18/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IND205/2013* (PD-FMD)	IND13-AF	639	633	0	99.06	0.94	ME-SA	Ind-2001d
2	O/IND222/2013* (PD-FMD)	IND13-AH	639	633	0	99.06	0.94	ME-SA	Ind-2001d
3	O/IND189/2013* (PD-FMD)	IND13-AE	639	632	0	98.90	1.10	ME-SA	Ind-2001d
4	O/IND219/2013* (PD-FMD)	IND13-AG	639	632	0	98.90	1.10	ME-SA	Ind-2001d
5	O/NEP/3/2013	NEP13-03	639	632	0	98.90	1.10	ME-SA	Ind-2001d
6	O/NEP/11/2013	NEP13-11	639	631	0	98.75	1.25	ME-SA	Ind-2001d
7	O/NEP/12/2013	NEP13-12	639	631	0	98.75	1.25	ME-SA	Ind-2001d
8	O/NEP/2/2014	NEP14-02	639	631	0	98.75	1.25	ME-SA	Ind-2001d
9	O/NEP/6/2014	NEP14-06	639	631	0	98.75	1.25	ME-SA	Ind-2001d
10	O/UAE/1/2014	UAE14-01	639	631	0	98.75	1.25	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	612	0	95.77	4.23	ME-SA	Ind-2001d
2	O/KUW/3/97 (DQ164904)	KUW97-03	639	586	0	91.71	8.29	ME-SA	Ind-2001a
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	585	0	91.55	8.45	ME-SA	Ind-2001b
4	O/UAE/4/2008	UAE08-04	636	573	0	90.09	9.91	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	572	0	89.51	10.49	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	571	0	89.36	10.64	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	567	0	88.73	11.27	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	566	0	88.58	11.42	ME-SA	PanAsia-2 ^{TER-08}
10	O/IRN/61/2001 (DQ164896)	IRN01-61	638	565	1	88.56	11.44	ME-SA	Irn-2001

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/11/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/141(90) 37Np	
Location: Bhaktapur, Nepal	Topotype: ME-SA
Date collected: 25/11/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-11.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 20/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IND205/2013* (PD-FMD)	IND13-AF	639	637	0	99.69	0.31	ME-SA	Ind-2001d
2	O/NEP/12/2013	NEP13-12	639	637	0	99.69	0.31	ME-SA	Ind-2001d
3	O/IND189/2013* (PD-FMD)	IND13-AE	639	636	0	99.53	0.47	ME-SA	Ind-2001d
4	O/IND219/2013* (PD-FMD)	IND13-AG	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/NEP/3/2013	NEP13-03	639	636	0	99.53	0.47	ME-SA	Ind-2001d
6	O/IND222/2013* (PD-FMD)	IND13-AH	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/NEP/2/2014	NEP14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/NEP/6/2014	NEP14-06	639	635	0	99.37	0.63	ME-SA	Ind-2001d
9	O/UAE/1/2014	UAE14-01	639	635	0	99.37	0.63	ME-SA	Ind-2001d
10	O/UAE/2/2014	UAE14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	615	0	96.24	3.76	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	590	0	92.33	7.67	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	589	0	92.18	7.82	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	574	0	89.83	10.17	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/PAK/16/2003 (DQ165068)	PAK03-16	639	568	0	88.89	11.11	ME-SA	Pak-98

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/12/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(85) 38Np	
Location: Bhaktapur, Nepal	Topotype: ME-SA
Date collected: 25/11/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-12.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 20/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IND205/2013* (PD-FMD)	IND13-AF	639	637	0	99.69	0.31	ME-SA	Ind-2001d
2	O/NEP/11/2013	NEP13-11	639	637	0	99.69	0.31	ME-SA	Ind-2001d
3	O/IND189/2013* (PD-FMD)	IND13-AE	639	636	0	99.53	0.47	ME-SA	Ind-2001d
4	O/IND219/2013* (PD-FMD)	IND13-AG	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/NEP/3/2013	NEP13-03	639	636	0	99.53	0.47	ME-SA	Ind-2001d
6	O/IND222/2013* (PD-FMD)	IND13-AH	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/NEP/2/2014	NEP14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/NEP/6/2014	NEP14-06	639	635	0	99.37	0.63	ME-SA	Ind-2001d
9	O/UAE/1/2014	UAE14-01	639	635	0	99.37	0.63	ME-SA	Ind-2001d
10	O/UAE/2/2014	UAE14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	614	0	96.09	3.91	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	589	0	92.18	7.82	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	588	0	92.02	7.98	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	574	0	90.25	9.75	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	574	0	89.83	10.17	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	573	0	89.67	10.33	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	569	0	89.05	10.95	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{TER-08}
10	O/PAK/16/2003 (DQ165068)	PAK03-16	639	567	0	88.73	11.27	ME-SA	Pak-98

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/15/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(133) 43Np	
Location: Chitwan, Nepal	Topotype: ME-SA
Date collected: 16/12/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-15.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 21/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/18/2013	NEP13-18	639	636	0	99.53	0.47	ME-SA	Ind-2001d
2	O/NEP/7/2014	NEP14-07	639	633	0	99.06	0.94	ME-SA	Ind-2001d
3	O/NEP/8/2014	NEP14-08	639	633	0	99.06	0.94	ME-SA	Ind-2001d
4	O/NEP/9/2014	NEP14-09	639	633	0	99.06	0.94	ME-SA	Ind-2001d
5	O/UAE/1/2014	UAE14-01	639	633	0	99.06	0.94	ME-SA	Ind-2001d
6	O/UAE/2/2014	UAE14-02	639	633	0	99.06	0.94	ME-SA	Ind-2001d
7	O/IND205/2013* (PD-FMD)	IND13-AF	639	632	0	98.90	1.10	ME-SA	Ind-2001d
8	O/IND189/2013* (PD-FMD)	IND13-AE	639	631	0	98.75	1.25	ME-SA	Ind-2001d
9	O/IND219/2013* (PD-FMD)	IND13-AG	639	631	0	98.75	1.25	ME-SA	Ind-2001d
10	O/NEP/3/2013	NEP13-03	639	631	0	98.75	1.25	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	609	0	95.31	4.69	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	588	0	92.02	7.98	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	585	0	91.55	8.45	ME-SA	Ind-2001a
4	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
5	O/UKG/35/2001 (AJ539141)	UKG01-35	639	574	0	89.83	10.17	ME-SA	PanAsia
6	O/UAE/4/2008	UAE08-04	636	571	0	89.78	10.22	ME-SA	Ind-2001c
7	O/IRN/18/2010	IRN10-18	639	572	0	89.51	10.49	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	572	0	89.51	10.49	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/16/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(140) 27Np	
Location: Nuwakot, Nepal	Topotype: ME-SA
Date collected: 23/12/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-16.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 20/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/17/2013	NEP13-17	639	637	0	99.69	0.31	ME-SA	Ind-2001d
2	O/IND127/2013* (PD-FMD)	IND13-AC	639	622	0	97.34	2.66	ME-SA	Ind-2001d
3	O/IND50/2013* (PD-FMD)	IND13-AA	639	621	0	97.18	2.82	ME-SA	Ind-2001d
4	O/NEP/16/2012	NEP12-16	639	621	0	97.18	2.82	ME-SA	Ind-2001d
5	O/NEP/11/2012	NEP12-11	639	620	0	97.03	2.97	ME-SA	Ind-2001d
6	O/NEP/13/2012	NEP12-13	639	620	0	97.03	2.97	ME-SA	Ind-2001d
7	O/BHU/1/2013	BHU13-01	639	619	0	96.87	3.13	ME-SA	Ind-2001d
8	O/IND52/2013* (PD-FMD)	IND13-AB	639	619	0	96.87	3.13	ME-SA	Ind-2001d
9	O/NEP/10/2012	NEP12-10	639	619	0	96.87	3.13	ME-SA	Ind-2001d
10	O/SAU/1/2014	SAU14-01	639	618	0	96.71	3.29	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	610	0	95.46	4.54	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	583	0	91.24	8.76	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	582	0	91.08	8.92	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	573	0	90.09	9.91	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	571	0	89.36	10.64	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	570	0	89.20	10.80	ME-SA	PanAsia
7	O/IRN/61/2001 (DQ164896)	IRN01-61	638	567	1	88.87	11.13	ME-SA	Irn-2001
8	O/IRN/18/2010	IRN10-18	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{BAL-09}
9	O/PAK/16/2010	PAK10-16	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{PUN-10}
10	O/TUR/257/2008* (FMDI)	TUR08-AD	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{TER-08}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/17/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(137) 41Np	
Location: Nuwakot, Nepal	Topotype: ME-SA
Date collected: 23/12/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-17.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 20/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/16/2013	NEP13-16	639	637	0	99.69	0.31	ME-SA	Ind-2001d
2	O/IND127/2013* (PD-FMD)	IND13-AC	639	622	0	97.34	2.66	ME-SA	Ind-2001d
3	O/IND50/2013* (PD-FMD)	IND13-AA	639	621	0	97.18	2.82	ME-SA	Ind-2001d
4	O/NEP/16/2012	NEP12-16	639	621	0	97.18	2.82	ME-SA	Ind-2001d
5	O/NEP/11/2012	NEP12-11	639	620	0	97.03	2.97	ME-SA	Ind-2001d
6	O/NEP/13/2012	NEP12-13	639	620	0	97.03	2.97	ME-SA	Ind-2001d
7	O/BHU/1/2013	BHU13-01	639	619	0	96.87	3.13	ME-SA	Ind-2001d
8	O/IND52/2013* (PD-FMD)	IND13-AB	639	619	0	96.87	3.13	ME-SA	Ind-2001d
9	O/NEP/10/2012	NEP12-10	639	619	0	96.87	3.13	ME-SA	Ind-2001d
10	O/SAU/1/2014	SAU14-01	639	618	0	96.71	3.29	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	610	0	95.46	4.54	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	583	0	91.24	8.76	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	582	0	91.08	8.92	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	571	0	89.36	10.64	ME-SA	PanAsia-2 ^{FAR-09}
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	569	1	89.18	10.82	ME-SA	Irn-2001
7	O/UKG/35/2001 (AJ539141)	UKG01-35	639	568	0	88.89	11.11	ME-SA	PanAsia
8	O/IRN/18/2010	IRN10-18	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{BAL-09}
9	O/PAK/16/2003 (DQ165068)	PAK03-16	639	567	0	88.73	11.27	ME-SA	Pak-98
10	O/PAK/16/2010	PAK10-16	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/18/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(148) 40Np	
Location: Arghakhanchi, Nepal	Topotype: ME-SA
Date collected: 26/12/2013	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP13-18.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Pig	No. of Nt determined: 639
Material used: BTy2 19/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/15/2013	NEP13-15	639	636	0	99.53	0.47	ME-SA	Ind-2001d
2	O/NEP/7/2014	NEP14-07	639	636	0	99.53	0.47	ME-SA	Ind-2001d
3	O/NEP/8/2014	NEP14-08	639	636	0	99.53	0.47	ME-SA	Ind-2001d
4	O/NEP/9/2014	NEP14-09	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/UAE/1/2014	UAE14-01	639	636	0	99.53	0.47	ME-SA	Ind-2001d
6	O/UAE/2/2014	UAE14-02	639	636	0	99.53	0.47	ME-SA	Ind-2001d
7	O/IND205/2013* (PD-FMD)	IND13-AF	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/IND189/2013* (PD-FMD)	IND13-AE	639	634	0	99.22	0.78	ME-SA	Ind-2001d
9	O/IND219/2013* (PD-FMD)	IND13-AG	639	634	0	99.22	0.78	ME-SA	Ind-2001d
10	O/NEP/3/2013	NEP13-03	639	634	0	99.22	0.78	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	612	0	95.77	4.23	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	589	0	92.18	7.82	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	588	0	92.02	7.98	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	574	0	90.25	9.75	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	575	0	89.98	10.02	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	573	0	89.67	10.33	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	571	0	89.36	10.64	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/1/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(163) 32Np	
Location: Sindhupalchock, Nepal	Topotype: ME-SA
Date collected: 05/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-01.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 20/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/2/2014	NEP14-02	639	638	0	99.84	0.16	ME-SA	Ind-2001d
2	O/IND205/2013* (PD-FMD)	IND13-AF	639	636	0	99.53	0.47	ME-SA	Ind-2001d
3	O/IND189/2013* (PD-FMD)	IND13-AE	639	635	0	99.37	0.63	ME-SA	Ind-2001d
4	O/IND219/2013* (PD-FMD)	IND13-AG	639	635	0	99.37	0.63	ME-SA	Ind-2001d
5	O/NEP/3/2013	NEP13-03	639	635	0	99.37	0.63	ME-SA	Ind-2001d
6	O/IND222/2013* (PD-FMD)	IND13-AH	639	634	0	99.22	0.78	ME-SA	Ind-2001d
7	O/NEP/11/2013	NEP13-11	639	634	0	99.22	0.78	ME-SA	Ind-2001d
8	O/NEP/12/2013	NEP13-12	639	634	0	99.22	0.78	ME-SA	Ind-2001d
9	O/NEP/6/2014	NEP14-06	639	634	0	99.22	0.78	ME-SA	Ind-2001d
10	O/UAE/1/2014	UAE14-01	639	634	0	99.22	0.78	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	613	0	95.93	4.07	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	590	0	92.33	7.67	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	589	0	92.18	7.82	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	576	0	90.57	9.43	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	577	0	90.30	9.70	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	574	0	89.83	10.17	ME-SA	PanAsia
7	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
9	O/IRN/18/2010	IRN10-18	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{BAL-09}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/2/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2070/71(164) 45Np	
Location: Sindhupalchock, Nepal	Topotype: ME-SA
Date collected: 05/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-02.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 20/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/1/2014	NEP14-01	639	638	0	99.84	0.16	ME-SA	Ind-2001d
2	O/IND205/2013* (PD-FMD)	IND13-AF	639	637	0	99.69	0.31	ME-SA	Ind-2001d
3	O/IND189/2013* (PD-FMD)	IND13-AE	639	636	0	99.53	0.47	ME-SA	Ind-2001d
4	O/IND219/2013* (PD-FMD)	IND13-AG	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/NEP/3/2013	NEP13-03	639	636	0	99.53	0.47	ME-SA	Ind-2001d
6	O/IND222/2013* (PD-FMD)	IND13-AH	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/NEP/11/2013	NEP13-11	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/NEP/12/2013	NEP13-12	639	635	0	99.37	0.63	ME-SA	Ind-2001d
9	O/NEP/6/2014	NEP14-06	639	635	0	99.37	0.63	ME-SA	Ind-2001d
10	O/UAE/1/2014	UAE14-01	639	635	0	99.37	0.63	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	614	0	96.09	3.91	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	591	0	92.49	7.51	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	590	0	92.33	7.67	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	577	0	90.72	9.28	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	575	0	89.98	10.02	ME-SA	PanAsia
7	O/IRN/8/2005	IRN05-08	639	571	0	89.36	10.64	ME-SA	PanAsia-2
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{TER-08}
9	O/IRN/18/2010	IRN10-18	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{BAL-09}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/4/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(152) 30Np	
Location: Nuwakot, Nepal	Topotype: ME-SA
Date collected: 07/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-04.SEQ
Date received for sequencing: 24/02/2014	Date sequence last updated: 26/02/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 21/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 5 days
Comments:	

Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/5/2014	NEP14-05	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/NEP/18/2013	NEP13-18	639	634	0	99.22	0.78	ME-SA	Ind-2001d
3	O/NEP/7/2014	NEP14-07	639	633	0	99.06	0.94	ME-SA	Ind-2001d
4	O/NEP/8/2014	NEP14-08	639	633	0	99.06	0.94	ME-SA	Ind-2001d
5	O/NEP/9/2014	NEP14-09	639	633	0	99.06	0.94	ME-SA	Ind-2001d
6	O/UAE/1/2014	UAE14-01	639	633	0	99.06	0.94	ME-SA	Ind-2001d
7	O/UAE/2/2014	UAE14-02	639	633	0	99.06	0.94	ME-SA	Ind-2001d
8	O/IND205/2013* (PD-FMD)	IND13-AF	639	632	0	98.90	1.10	ME-SA	Ind-2001d
9	O/IND189/2013* (PD-FMD)	IND13-AE	639	631	0	98.75	1.25	ME-SA	Ind-2001d
10	O/IND219/2013* (PD-FMD)	IND13-AG	639	631	0	98.75	1.25	ME-SA	Ind-2001d

Most Closely Related Reference Viruses

(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	609	0	95.31	4.69	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	586	0	91.71	8.29	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	585	0	91.55	8.45	ME-SA	Ind-2001a
4	O/IRN/31/2009	IRN09-31	639	577	0	90.30	9.70	ME-SA	PanAsia-2 ^{FAR-09}
5	O/IRN/18/2010	IRN10-18	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{BAL-09}
6	O/UAE/4/2008	UAE08-04	636	572	0	89.94	10.06	ME-SA	Ind-2001c
7	O/IRN/8/2005	IRN05-08	639	574	0	89.83	10.17	ME-SA	PanAsia-2
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	574	0	89.83	10.17	ME-SA	PanAsia
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	573	0	89.67	10.33	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	572	0	89.51	10.49	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/5/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(151) 31Np	
Location: Nuwakot, Nepal	Topotype: ME-SA
Date collected: 07/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-05.SEQ
Date received for sequencing: 27/02/2014	Date sequence last updated: 01/03/2014
Species: Buffalo	No. of Nt determined: 639
Material used: BTy2 25/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 2 days
Comments:	

Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/4/2014	NEP14-04	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/NEP/18/2013	NEP13-18	639	634	0	99.22	0.78	ME-SA	Ind-2001d
3	O/NEP/7/2014	NEP14-07	639	633	0	99.06	0.94	ME-SA	Ind-2001d
4	O/NEP/8/2014	NEP14-08	639	633	0	99.06	0.94	ME-SA	Ind-2001d
5	O/NEP/9/2014	NEP14-09	639	633	0	99.06	0.94	ME-SA	Ind-2001d
6	O/UAE/1/2014	UAE14-01	639	633	0	99.06	0.94	ME-SA	Ind-2001d
7	O/UAE/2/2014	UAE14-02	639	633	0	99.06	0.94	ME-SA	Ind-2001d
8	O/IND205/2013* (PD-FMD)	IND13-AF	639	632	0	98.90	1.10	ME-SA	Ind-2001d
9	O/IND189/2013* (PD-FMD)	IND13-AE	639	631	0	98.75	1.25	ME-SA	Ind-2001d
10	O/IND219/2013* (PD-FMD)	IND13-AG	639	631	0	98.75	1.25	ME-SA	Ind-2001d

Most Closely Related Reference Viruses

(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	609	0	95.31	4.69	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	586	0	91.71	8.29	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	585	0	91.55	8.45	ME-SA	Ind-2001a
4	O/IRN/31/2009	IRN09-31	639	577	0	90.30	9.70	ME-SA	PanAsia-2 ^{FAR-09}
5	O/IRN/18/2010	IRN10-18	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{BAL-09}
6	O/UAE/4/2008	UAE08-04	636	572	0	89.94	10.06	ME-SA	Ind-2001c
7	O/IRN/8/2005	IRN05-08	639	574	0	89.83	10.17	ME-SA	PanAsia-2
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	574	0	89.83	10.17	ME-SA	PanAsia
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	573	0	89.67	10.33	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	572	0	89.51	10.49	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/6/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(172) 33Np	
Location: Ilam, Nepal	Topotype: ME-SA
Date collected: 07/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-06.SEQ
Date received for sequencing: 27/02/2014	Date sequence last updated: 01/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 22/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 2 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IND205/2013* (PD-FMD)	IND13-AF	639	637	0	99.69	0.31	ME-SA	Ind-2001d
2	O/IND189/2013* (PD-FMD)	IND13-AE	639	636	0	99.53	0.47	ME-SA	Ind-2001d
3	O/IND219/2013* (PD-FMD)	IND13-AG	639	636	0	99.53	0.47	ME-SA	Ind-2001d
4	O/NEP/3/2013	NEP13-03	639	636	0	99.53	0.47	ME-SA	Ind-2001d
5	O/IND222/2013* (PD-FMD)	IND13-AH	639	635	0	99.37	0.63	ME-SA	Ind-2001d
6	O/NEP/11/2013	NEP13-11	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/NEP/12/2013	NEP13-12	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/NEP/2/2014	NEP14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
9	O/UAE/1/2014	UAE14-01	639	635	0	99.37	0.63	ME-SA	Ind-2001d
10	O/UAE/2/2014	UAE14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	614	0	96.09	3.91	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	589	0	92.18	7.82	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	588	0	92.02	7.98	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	576	0	90.57	9.43	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	575	0	89.98	10.02	ME-SA	PanAsia
7	O/TUR/257/2008* (FMDI)	TUR08-AD	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{TER-08}
8	O/IRN/18/2010	IRN10-18	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{BAL-09}
9	O/IRN/8/2005	IRN05-08	639	569	0	89.05	10.95	ME-SA	PanAsia-2
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/7/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(170) 34Np	
Location: Ilam, Nepal	Topotype: ME-SA
Date collected: 07/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-07.SEQ
Date received for sequencing: 27/02/2014	Date sequence last updated: 01/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 24/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 2 days
Comments:	

Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/8/2014	NEP14-08	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/NEP/18/2013	NEP13-18	639	636	0	99.53	0.47	ME-SA	Ind-2001d
3	O/NEP/9/2014	NEP14-09	639	635	0	99.37	0.63	ME-SA	Ind-2001d
4	O/UAE/1/2014	UAE14-01	639	635	0	99.37	0.63	ME-SA	Ind-2001d
5	O/UAE/2/2014	UAE14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
6	O/IND205/2013* (PD-FMD)	IND13-AF	639	634	0	99.22	0.78	ME-SA	Ind-2001d
7	O/IND189/2013* (PD-FMD)	IND13-AE	639	633	0	99.06	0.94	ME-SA	Ind-2001d
8	O/IND219/2013* (PD-FMD)	IND13-AG	639	633	0	99.06	0.94	ME-SA	Ind-2001d
9	O/NEP/15/2013	NEP13-15	639	633	0	99.06	0.94	ME-SA	Ind-2001d
10	O/NEP/3/2013	NEP13-03	639	633	0	99.06	0.94	ME-SA	Ind-2001d

Most Closely Related Reference Viruses

(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	611	0	95.62	4.38	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	588	0	92.02	7.98	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	587	0	91.86	8.14	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/UKG/35/2001 (AJ539141)	UKG01-35	639	576	0	90.14	9.86	ME-SA	PanAsia
6	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
7	O/IRN/18/2010	IRN10-18	639	572	0	89.51	10.49	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	572	0	89.51	10.49	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/8/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(169) 35Np	
Location: Ilam, Nepal	Topotype: ME-SA
Date collected: 07/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-08.SEQ
Date received for sequencing: 27/02/2014	Date sequence last updated: 01/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 22/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 2 days
Comments:	

Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/7/2014	NEP14-07	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/NEP/18/2013	NEP13-18	639	636	0	99.53	0.47	ME-SA	Ind-2001d
3	O/NEP/9/2014	NEP14-09	639	635	0	99.37	0.63	ME-SA	Ind-2001d
4	O/UAE/1/2014	UAE14-01	639	635	0	99.37	0.63	ME-SA	Ind-2001d
5	O/UAE/2/2014	UAE14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
6	O/IND205/2013* (PD-FMD)	IND13-AF	639	634	0	99.22	0.78	ME-SA	Ind-2001d
7	O/IND189/2013* (PD-FMD)	IND13-AE	639	633	0	99.06	0.94	ME-SA	Ind-2001d
8	O/IND219/2013* (PD-FMD)	IND13-AG	639	633	0	99.06	0.94	ME-SA	Ind-2001d
9	O/NEP/15/2013	NEP13-15	639	633	0	99.06	0.94	ME-SA	Ind-2001d
10	O/NEP/3/2013	NEP13-03	639	633	0	99.06	0.94	ME-SA	Ind-2001d

Most Closely Related Reference Viruses

(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	611	0	95.62	4.38	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	588	0	92.02	7.98	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	587	0	91.86	8.14	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/UKG/35/2001 (AJ539141)	UKG01-35	639	576	0	90.14	9.86	ME-SA	PanAsia
6	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
7	O/IRN/18/2010	IRN10-18	639	572	0	89.51	10.49	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	572	0	89.51	10.49	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 01/03/2014
WRLFMD Ref No: NEP/9/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 2013/14(168) 36Np	
Location: Jhapa, Nepal	Topotype: ME-SA
Date collected: 07/01/2014	Genotype/strain: Ind-2001d
Date received by WRLFMD: 05/02/2014	Sequence filename: NEP14-09.SEQ
Date received for sequencing: 27/02/2014	Date sequence last updated: 01/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 24/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3799
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 2 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/NEP/18/2013	NEP13-18	639	636	0	99.53	0.47	ME-SA	Ind-2001d
2	O/NEP/7/2014	NEP14-07	639	635	0	99.37	0.63	ME-SA	Ind-2001d
3	O/NEP/8/2014	NEP14-08	639	635	0	99.37	0.63	ME-SA	Ind-2001d
4	O/UAE/1/2014	UAE14-01	639	635	0	99.37	0.63	ME-SA	Ind-2001d
5	O/UAE/2/2014	UAE14-02	639	635	0	99.37	0.63	ME-SA	Ind-2001d
6	O/IND205/2013* (PD-FMD)	IND13-AF	639	634	0	99.22	0.78	ME-SA	Ind-2001d
7	O/IND189/2013* (PD-FMD)	IND13-AE	639	633	0	99.06	0.94	ME-SA	Ind-2001d
8	O/IND219/2013* (PD-FMD)	IND13-AG	639	633	0	99.06	0.94	ME-SA	Ind-2001d
9	O/NEP/15/2013	NEP13-15	639	633	0	99.06	0.94	ME-SA	Ind-2001d
10	O/NEP/3/2013	NEP13-03	639	633	0	99.06	0.94	ME-SA	Ind-2001d
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009	BHU09-03	639	611	0	95.62	4.38	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	588	0	92.02	7.98	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	587	0	91.86	8.14	ME-SA	Ind-2001a
4	O/UAE/4/2008	UAE08-04	636	573	0	90.09	9.91	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	574	0	89.83	10.17	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	573	0	89.67	10.33	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/PAK/16/2003 (DQ165068)	PAK03-16	639	568	0	88.89	11.11	ME-SA	Pak-98

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Nepal in 2012-2014

Batch: WRLFMD/2014/00003

◆ indicates viruses in this batch

Software: MEGA 6.06

Analysis

----- Phylogeny Reconstruction

Scope ----- All Selected Taxa

Statistical Method ----- Neighbor-joining

Phylogeny Test

Test of Phylogeny ----- Bootstrap method

No. of Bootstrap Replications ----- 1000

Substitution Model

Substitutions Type ----- Nucleotide

Model/Method ----- Kimura 2-parameter model

Substitutions to Include ----- d: Transitions + Transversions

Rates and Patterns

Rates among Sites ----- Uniform rates

Pattern among Lineages ----- Same (Homogeneous)

Data Subset to Use

Gaps/Missing Data Treatment ----- Pairwise deletion

Codons Included ----- 1st+2nd+3rd+Non-Coding

No. of Sites : 642

No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & K. Bachanek-Bankowska,
03 March 2014

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