

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

Genotyping Report

Report Date for this Batch: 18 June 2014

FMDV type O

Country: Egypt

Period: 2013-2014

No. of samples: 11

BATCH: WRLFMD/2014/00017



The contents of this report are copyright and should not be reproduced without permission

© The Pirbright Institute

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 11/06/2014
WRLFMD Ref No: EGY/24/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 3	
Location: Dorgram, Damietta, Damietta, Egypt	Topotype: EA-3
Date collected: 27/11/2013	Genotype/strain: unnamed
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY13-24.SEQ
Date received for sequencing: 02/05/2014	Date sequence last updated: 07/05/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 30/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3858
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
	Sequencing time: 40 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/EGY/18/2014	EGY14-18	639	639	0	100.00	0.00	EA-3	unnamed
2	O/EGY/1/2014	EGY14-01	639	638	0	99.84	0.16	EA-3	unnamed
3	O/EGY/25/2013	EGY13-25	639	638	0	99.84	0.16	EA-3	unnamed
4	O/EGY/3/2014	EGY14-03	639	638	0	99.84	0.16	EA-3	unnamed
5	O/EGY/5/2014	EGY14-05	639	638	0	99.84	0.16	EA-3	unnamed
6	O/EGY/10/2014	EGY14-10	639	637	0	99.69	0.31	EA-3	unnamed
7	O/EGY/28/2013	EGY13-28	639	637	0	99.69	0.31	EA-3	unnamed
8	O/EGY/29/2013	EGY13-29	639	637	0	99.69	0.31	EA-3	unnamed
9	O/EGY/4/2014	EGY14-04	639	637	0	99.69	0.31	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	637	0	99.69	0.31	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	575	0	89.98	10.02	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	546	0	85.45	14.55	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	545	1	85.42	14.58	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	545	0	85.29	14.71	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	543	0	84.98	15.02	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	542	0	84.82	15.18	WA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	540	0	84.51	15.49	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	540	0	84.51	15.49	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	540	0	84.51	15.49	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	539	0	84.35	15.65	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O WRLFMD Ref No: EGY/25/2013 Batch No: WRLFMD/2014/00017 Sender Ref: 4 Location: Elezba Hamra, Abomatamer, Behaira, Egypt Date collected: 12/12/2013 Date received by WRLFMD: 23/04/2014 Date received for sequencing: 02/05/2014 Species: Cattle Material used: BTy1 30/04/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 11/06/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: EA-3 Genotype/strain: unnamed Sequence filename: EGY13-25.SEQ Date sequence last updated: 07/05/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3858 Min. no. of nt for comparison: 600 Total turn-around time: 49 days Sequencing time: 40 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/EGY/18/2014	EGY14-18	639	638	0	99.84	0.16	EA-3	unnamed
2	O/EGY/24/2013	EGY13-24	639	638	0	99.84	0.16	EA-3	unnamed
3	O/EGY/1/2014	EGY14-01	639	637	0	99.69	0.31	EA-3	unnamed
4	O/EGY/3/2014	EGY14-03	639	637	0	99.69	0.31	EA-3	unnamed
5	O/EGY/5/2014	EGY14-05	639	637	0	99.69	0.31	EA-3	unnamed
6	O/EGY/10/2014	EGY14-10	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/28/2013	EGY13-28	639	636	0	99.53	0.47	EA-3	unnamed
8	O/EGY/29/2013	EGY13-29	639	636	0	99.53	0.47	EA-3	unnamed
9	O/EGY/4/2014	EGY14-04	639	636	0	99.53	0.47	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	636	0	99.53	0.47	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	576	0	90.14	9.86	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	547	0	85.60	14.40	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	546	1	85.58	14.42	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	544	0	85.13	14.87	EA-3	unnamed
5	O/GHA/5/93 (AJ303488)	GHA93-05	639	543	0	84.98	15.02	WA	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	543	0	84.98	15.02	ME-SA	unnamed
7	O/CIV/8/99 (AJ303485)	CIV99-08	639	539	0	84.35	15.65	WA	unnamed
8	O/UGA/3/2002 (DQ165077)	UGA02-03	639	539	0	84.35	15.65	EA-2	unnamed
9	O/UKG/35/2001 (AJ539141)	UKG01-35	639	539	0	84.35	15.65	ME-SA	PanAsia
10	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	539	0	84.35	15.65	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 11/06/2014
WRLFMD Ref No: EGY/28/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 18	
Location: Sede Salem, Kafr el-Sheikh, Egypt	Topotype: EA-3
Date collected: 22/12/2013	Genotype/strain: unnamed
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY13-28.SEQ
Date received for sequencing: 19/05/2014	Date sequence last updated: 04/06/2014
Species: Water Buffalo	No. of Nt determined: 639
Material used: BTy1 01/05/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3858
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
	Sequencing time: 23 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/EGY/29/2013	EGY13-29	639	639	0	100.00	0.00	EA-3	unnamed
2	O/EGY/18/2014	EGY14-18	639	637	0	99.69	0.31	EA-3	unnamed
3	O/EGY/24/2013	EGY13-24	639	637	0	99.69	0.31	EA-3	unnamed
4	O/EGY/6/2014	EGY14-06	639	637	0	99.69	0.31	EA-3	unnamed
5	O/EGY/1/2014	EGY14-01	639	636	0	99.53	0.47	EA-3	unnamed
6	O/EGY/25/2013	EGY13-25	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/3/2014	EGY14-03	639	636	0	99.53	0.47	EA-3	unnamed
8	O/EGY/5/2014	EGY14-05	639	636	0	99.53	0.47	EA-3	unnamed
9	O/EGY/10/2014	EGY14-10	639	635	0	99.37	0.63	EA-3	unnamed
10	O/EGY/4/2014	EGY14-04	639	635	0	99.37	0.63	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	573	0	89.67	10.33	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	544	0	85.13	14.87	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	543	1	85.11	14.89	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	543	0	84.98	15.02	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	541	0	84.66	15.34	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	540	0	84.51	15.49	WA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	538	0	84.19	15.81	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	538	0	84.19	15.81	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	538	0	84.19	15.81	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 11/06/2014
WRLFMD Ref No: EGY/29/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 6	
Location: Quedar, El Delengat, Behaira, Egypt	Topotype: EA-3
Date collected: 26/12/2013	Genotype/strain: unnamed
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY13-29.SEQ
Date received for sequencing: 02/05/2014	Date sequence last updated: 07/05/2014
Species: Water Buffalo	No. of Nt determined: 639
Material used: BTy1 30/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3858
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
	Sequencing time: 40 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/EGY/28/2013	EGY13-28	639	639	0	100.00	0.00	EA-3	unnamed
2	O/EGY/18/2014	EGY14-18	639	637	0	99.69	0.31	EA-3	unnamed
3	O/EGY/24/2013	EGY13-24	639	637	0	99.69	0.31	EA-3	unnamed
4	O/EGY/6/2014	EGY14-06	639	637	0	99.69	0.31	EA-3	unnamed
5	O/EGY/1/2014	EGY14-01	639	636	0	99.53	0.47	EA-3	unnamed
6	O/EGY/25/2013	EGY13-25	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/3/2014	EGY14-03	639	636	0	99.53	0.47	EA-3	unnamed
8	O/EGY/5/2014	EGY14-05	639	636	0	99.53	0.47	EA-3	unnamed
9	O/EGY/10/2014	EGY14-10	639	635	0	99.37	0.63	EA-3	unnamed
10	O/EGY/4/2014	EGY14-04	639	635	0	99.37	0.63	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	573	0	89.67	10.33	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	544	0	85.13	14.87	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	543	1	85.11	14.89	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	543	0	84.98	15.02	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	541	0	84.66	15.34	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	540	0	84.51	15.49	WA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	538	0	84.19	15.81	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	538	0	84.19	15.81	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	538	0	84.19	15.81	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 11/06/2014
WRLFMD Ref No: EGY/1/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 5	
Location: ALX University, Alexandria, Egypt	Topotype: EA-3
Date collected: 01/01/2014	Genotype/strain: unnamed
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY14-01.SEQ
Date received for sequencing: 19/05/2014	Date sequence last updated: 04/06/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 01/05/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3858
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
	Sequencing time: 23 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/EGY/18/2014	EGY14-18	639	638	0	99.84	0.16	EA-3	unnamed
2	O/EGY/24/2013	EGY13-24	639	638	0	99.84	0.16	EA-3	unnamed
3	O/EGY/25/2013	EGY13-25	639	637	0	99.69	0.31	EA-3	unnamed
4	O/EGY/3/2014	EGY14-03	639	637	0	99.69	0.31	EA-3	unnamed
5	O/EGY/5/2014	EGY14-05	639	637	0	99.69	0.31	EA-3	unnamed
6	O/EGY/10/2014	EGY14-10	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/28/2013	EGY13-28	639	636	0	99.53	0.47	EA-3	unnamed
8	O/EGY/29/2013	EGY13-29	639	636	0	99.53	0.47	EA-3	unnamed
9	O/EGY/4/2014	EGY14-04	639	636	0	99.53	0.47	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	636	0	99.53	0.47	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	574	0	89.83	10.17	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	545	0	85.29	14.71	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	544	1	85.27	14.73	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	544	0	85.13	14.87	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	542	0	84.82	15.18	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	541	0	84.66	15.34	WA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	539	0	84.35	15.65	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	539	0	84.35	15.65	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	539	0	84.35	15.65	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	538	0	84.19	15.81	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O WRLFMD Ref No: EGY/3/2014 Batch No: WRLFMD/2014/00017 Sender Ref: 8 Location: El Monair, Mashtol, Al Sharqia, Egypt Date collected: 05/01/2014 Date received by WRLFMD: 23/04/2014 Date received for sequencing: 19/05/2014 Species: Cattle Material used: BTy2 03/05/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 11/06/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: EA-3 Genotype/strain: unnamed Sequence filename: EGY14-03.SEQ Date sequence last updated: 04/06/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3858 Min. no. of nt for comparison: 600 Total turn-around time: 49 days Sequencing time: 23 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/EGY/18/2014	EGY14-18	639	638	0	99.84	0.16	EA-3	unnamed
2	O/EGY/24/2013	EGY13-24	639	638	0	99.84	0.16	EA-3	unnamed
3	O/EGY/4/2014	EGY14-04	639	638	0	99.84	0.16	EA-3	unnamed
4	O/EGY/1/2014	EGY14-01	639	637	0	99.69	0.31	EA-3	unnamed
5	O/EGY/25/2013	EGY13-25	639	637	0	99.69	0.31	EA-3	unnamed
6	O/EGY/5/2014	EGY14-05	639	637	0	99.69	0.31	EA-3	unnamed
7	O/EGY/10/2014	EGY14-10	639	636	0	99.53	0.47	EA-3	unnamed
8	O/EGY/28/2013	EGY13-28	639	636	0	99.53	0.47	EA-3	unnamed
9	O/EGY/29/2013	EGY13-29	639	636	0	99.53	0.47	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	636	0	99.53	0.47	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	574	0	89.83	10.17	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	545	0	85.29	14.71	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	544	1	85.27	14.73	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	544	0	85.13	14.87	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	542	0	84.82	15.18	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	541	0	84.66	15.34	WA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	539	0	84.35	15.65	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	539	0	84.35	15.65	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	539	0	84.35	15.65	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	538	0	84.19	15.81	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O WRLFMD Ref No: EGY/4/2014 Batch No: WRLFMD/2014/00017 Sender Ref: 9 Location: El Monair, Mashtol, Al Sharqia, Egypt Date collected: 05/01/2014 Date received by WRLFMD: 23/04/2014 Date received for sequencing: 19/05/2014 Species: Cattle Material used: BTy2 03/05/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 11/06/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: EA-3 Genotype/strain: unnamed Sequence filename: EGY14-04.SEQ Date sequence last updated: 04/06/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3858 Min. no. of nt for comparison: 600 Total turn-around time: 49 days Sequencing time: 23 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/EGY/3/2014	EGY14-03	639	638	0	99.84	0.16	EA-3	unnamed
2	O/EGY/18/2014	EGY14-18	639	637	0	99.69	0.31	EA-3	unnamed
3	O/EGY/24/2013	EGY13-24	639	637	0	99.69	0.31	EA-3	unnamed
4	O/EGY/1/2014	EGY14-01	639	636	0	99.53	0.47	EA-3	unnamed
5	O/EGY/25/2013	EGY13-25	639	636	0	99.53	0.47	EA-3	unnamed
6	O/EGY/5/2014	EGY14-05	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/10/2014	EGY14-10	639	635	0	99.37	0.63	EA-3	unnamed
8	O/EGY/28/2013	EGY13-28	639	635	0	99.37	0.63	EA-3	unnamed
9	O/EGY/29/2013	EGY13-29	639	635	0	99.37	0.63	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	635	0	99.37	0.63	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	573	0	89.67	10.33	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	544	0	85.13	14.87	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	543	1	85.11	14.89	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	543	0	84.98	15.02	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	541	0	84.66	15.34	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	540	0	84.51	15.49	WA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	538	0	84.19	15.81	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	538	0	84.19	15.81	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	538	0	84.19	15.81	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 11/06/2014
WRLFMD Ref No: EGY/5/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 10	
Location: Meet Gazal, El Santa, Gharbia, Egypt	Topotype: EA-3
Date collected: 06/01/2014	Genotype/strain: unnamed
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY14-05.SEQ
Date received for sequencing: 19/05/2014	Date sequence last updated: 04/06/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 01/05/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3858
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
	Sequencing time: 23 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/EGY/18/2014	EGY14-18	639	638	0	99.84	0.16	EA-3	unnamed
2	O/EGY/24/2013	EGY13-24	639	638	0	99.84	0.16	EA-3	unnamed
3	O/EGY/1/2014	EGY14-01	639	637	0	99.69	0.31	EA-3	unnamed
4	O/EGY/25/2013	EGY13-25	639	637	0	99.69	0.31	EA-3	unnamed
5	O/EGY/3/2014	EGY14-03	639	637	0	99.69	0.31	EA-3	unnamed
6	O/EGY/10/2014	EGY14-10	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/28/2013	EGY13-28	639	636	0	99.53	0.47	EA-3	unnamed
8	O/EGY/29/2013	EGY13-29	639	636	0	99.53	0.47	EA-3	unnamed
9	O/EGY/4/2014	EGY14-04	639	636	0	99.53	0.47	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	636	0	99.53	0.47	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	574	0	89.83	10.17	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	545	0	85.29	14.71	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	544	1	85.27	14.73	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	544	0	85.13	14.87	EA-3	unnamed
5	O/GHA/5/93 (AJ303488)	GHA93-05	639	543	0	84.98	15.02	WA	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	542	0	84.82	15.18	ME-SA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	539	0	84.35	15.65	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	539	0	84.35	15.65	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	539	0	84.35	15.65	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	538	0	84.19	15.81	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O WRLFMD Ref No: EGY/6/2014 Batch No: WRLFMD/2014/00017 Sender Ref: 11 Location: Karia 18, Ganakies, Behaira, Egypt Date collected: 16/01/2014 Date received by WRLFMD: 23/04/2014 Date received for sequencing: 19/05/2014 Species: Cattle Material used: BTy1 02/05/2014 & BTy2 03/05/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 11/06/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: EA-3 Genotype/strain: unnamed Sequence filename: EGY14-06.SEQ Date sequence last updated: 04/06/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3858 Min. no. of nt for comparison: 600 Total turn-around time: 49 days Sequencing time: 23 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/EGY/18/2014	EGY14-18	639	637	0	99.69	0.31	EA-3	unnamed
2	O/EGY/24/2013	EGY13-24	639	637	0	99.69	0.31	EA-3	unnamed
3	O/EGY/28/2013	EGY13-28	639	637	0	99.69	0.31	EA-3	unnamed
4	O/EGY/29/2013	EGY13-29	639	637	0	99.69	0.31	EA-3	unnamed
5	O/EGY/1/2014	EGY14-01	639	636	0	99.53	0.47	EA-3	unnamed
6	O/EGY/25/2013	EGY13-25	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/3/2014	EGY14-03	639	636	0	99.53	0.47	EA-3	unnamed
8	O/EGY/5/2014	EGY14-05	639	636	0	99.53	0.47	EA-3	unnamed
9	O/EGY/10/2014	EGY14-10	639	635	0	99.37	0.63	EA-3	unnamed
10	O/EGY/4/2014	EGY14-04	639	635	0	99.37	0.63	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	573	0	89.67	10.33	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	544	0	85.13	14.87	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	543	1	85.11	14.89	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	543	0	84.98	15.02	EA-3	unnamed
5	O/GHA/5/93 (AJ303488)	GHA93-05	639	542	0	84.82	15.18	WA	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	541	0	84.66	15.34	ME-SA	unnamed
7	O/UGA/17/98 (HM211075)	UGA98-17	639	539	0	84.35	15.65	EA-4	unnamed
8	O/CIV/8/99 (AJ303485)	CIV99-08	639	538	0	84.19	15.81	WA	unnamed
9	O/UGA/3/2002 (DQ165077)	UGA02-03	639	538	0	84.19	15.81	EA-2	unnamed
10	O/UKG/35/2001 (AJ539141)	UKG01-35	639	538	0	84.19	15.81	ME-SA	PanAsia

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 11/06/2014
WRLFMD Ref No: EGY/10/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 21	
Location: Kafr Elsabi, Shabraket, Behaira, Egypt	Topotype: EA-3
Date collected: 29/01/2014	Genotype/strain: unnamed
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY14-10.SEQ
Date received for sequencing: 19/05/2014	Date sequence last updated: 04/06/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy2 01/05/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3858
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
	Sequencing time: 23 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/EGY/18/2014	EGY14-18	639	637	0	99.69	0.31	EA-3	unnamed
2	O/EGY/24/2013	EGY13-24	639	637	0	99.69	0.31	EA-3	unnamed
3	O/EGY/1/2014	EGY14-01	639	636	0	99.53	0.47	EA-3	unnamed
4	O/EGY/25/2013	EGY13-25	639	636	0	99.53	0.47	EA-3	unnamed
5	O/EGY/3/2014	EGY14-03	639	636	0	99.53	0.47	EA-3	unnamed
6	O/EGY/5/2014	EGY14-05	639	636	0	99.53	0.47	EA-3	unnamed
7	O/EGY/28/2013	EGY13-28	639	635	0	99.37	0.63	EA-3	unnamed
8	O/EGY/29/2013	EGY13-29	639	635	0	99.37	0.63	EA-3	unnamed
9	O/EGY/4/2014	EGY14-04	639	635	0	99.37	0.63	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	635	0	99.37	0.63	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	575	0	89.98	10.02	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	546	0	85.45	14.55	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	545	1	85.42	14.58	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	545	0	85.29	14.71	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	543	0	84.98	15.02	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	542	0	84.82	15.18	WA	unnamed
7	O/UKG/35/2001 (AJ539141)	UKG01-35	639	542	0	84.82	15.18	ME-SA	PanAsia
8	O/PAK/16/2010	PAK10-16	639	541	0	84.66	15.34	ME-SA	PanAsia-2 ^{PUN-10}
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	540	0	84.51	15.49	ME-SA	unnamed
10	O/ETH/2/2006 (FJ798127)	ETH06-02	639	539	0	84.35	15.65	EA-3	unnamed

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O WRLFMD Ref No: EGY/18/2014 Batch No: WRLFMD/2014/00017 Sender Ref: 26 Location: Abo Mostafa, El Raiad, Kafr el-Sheikh, Egypt Date collected: 01/03/2014 Date received by WRLFMD: 23/04/2014 Date received for sequencing: 19/05/2014 Species: Water Buffalo Material used: BTy1 08/05/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 11/06/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: EA-3 Genotype/strain: unnamed Sequence filename: EGY14-18.SEQ Date sequence last updated: 04/06/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3858 Min. no. of nt for comparison: 600 Total turn-around time: 49 days Sequencing time: 23 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/EGY/24/2013	EGY13-24	639	639	0	100.00	0.00	EA-3	unnamed
2	O/EGY/1/2014	EGY14-01	639	638	0	99.84	0.16	EA-3	unnamed
3	O/EGY/25/2013	EGY13-25	639	638	0	99.84	0.16	EA-3	unnamed
4	O/EGY/3/2014	EGY14-03	639	638	0	99.84	0.16	EA-3	unnamed
5	O/EGY/5/2014	EGY14-05	639	638	0	99.84	0.16	EA-3	unnamed
6	O/EGY/10/2014	EGY14-10	639	637	0	99.69	0.31	EA-3	unnamed
7	O/EGY/28/2013	EGY13-28	639	637	0	99.69	0.31	EA-3	unnamed
8	O/EGY/29/2013	EGY13-29	639	637	0	99.69	0.31	EA-3	unnamed
9	O/EGY/4/2014	EGY14-04	639	637	0	99.69	0.31	EA-3	unnamed
10	O/EGY/6/2014	EGY14-06	639	637	0	99.69	0.31	EA-3	unnamed
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/SUD/2/86 (DQ165075)	SUD86-02	639	575	0	89.98	10.02	EA-3	unnamed
2	O/ETH/1/2007 (FJ798137)	ETH07-01	639	546	0	85.45	14.55	EA-3	unnamed
3	O/K83/79* (AJ303511)	KEN79B83	638	545	1	85.42	14.58	EA-1	unnamed
4	O/ETH/3/2004 (FJ798109)	ETH04-03	639	545	0	85.29	14.71	EA-3	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	543	0	84.98	15.02	ME-SA	unnamed
6	O/GHA/5/93 (AJ303488)	GHA93-05	639	542	0	84.82	15.18	WA	unnamed
7	O/UGA/3/2002 (DQ165077)	UGA02-03	639	540	0	84.51	15.49	EA-2	unnamed
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	540	0	84.51	15.49	ME-SA	PanAsia
9	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	540	0	84.51	15.49	ME-SA	unnamed
10	O/PAK/16/2010	PAK10-16	639	539	0	84.35	15.65	ME-SA	PanAsia-2 ^{PUN-10}

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

Report on FMDV O in Egypt in 2013-2014

Batch: WRLFMD/2014/00017

◆ indicates viruses in this batch

Software: MEGA 6.06

Analysis

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

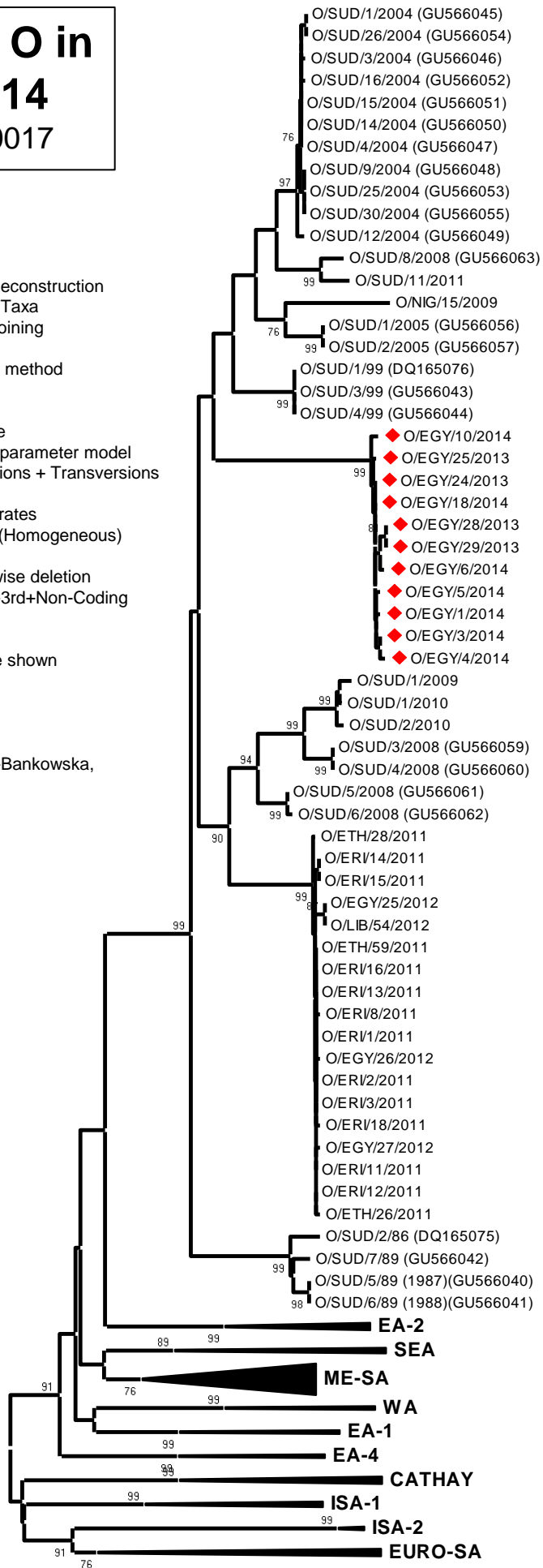
Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & K. Bachanek-Bankowska,
16 June 2014

© The Pirbright Institute

(not to be reproduced without permission)



EA-3