FMD Genotyping Reports

Lab Reference WRL batch Number: WRLMEG/2026/000006 &16, 000015-15 & 18-20

Sent to: [redacted]

Date Received: 11th April 2026

Country of Origin*: Botswana, Eswatini, Lesotho, Zambia, Zimbabwe

These reports have been prepared on behalf of the Botswana Veterinary Institute (BVI) from VP1 sequences kindly supplied from Botswana, Eswatini, Lesotho, Zambia and Zimbabwe.

Please note that all our phylogenetic trees can be accessed via the internet at: http://www.wrlfmd.org/

Results Approved By: [redacted]

Da

Official Stamp: [redacted]

[redacted]

To help us improve the quality of our service, please send any suggestions or requests to the Reference Laboratory by email (reflabsfeedback@pirbright.ac.uk).

* Data supplied by the customer

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

FMDV Genotyping Report

Generated from: FMDtype | FMDV Genotyping Tool
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Citation: WRLFMD. 2026. FMDV Genotyping Report [WRLMEG/2026/000018]. (Accessed 24/04/26)

FMDV serotype: SAT1
Country: Botswana
Year: 2026
Batch: WRLMEG/2026/000018
No. of sequences: 3
Reported date: 24 April 2026

WRLFMD Website: https://www.wrlfmd.org/
Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from

Virus sample: BOT55/2026

Sample details

Reception Date:	2026-04-12
Sender reference:	BOT55/2026
Location of origin:	Ramatlabama, Barolong, Southern District
Country of origin:	Botswana
Date of collection:	2026-03-31
Host species:	bovine

Genotyping details

Serotype:	SAT1
Topotype:	III
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	657
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591369	BOT54/2026	Bovine	100.00	0	SAT1	III	None	None
1613175	SAR/8/2025	Cattle	100.00	0	SAT1	III	None	None
1613174	SAR/7/2025	Cattle	99.85	0	SAT1	III	None	None
1591373	SWZ06/2026	Bovine	99.70	0	SAT1	III	None	None
1613172	SAR/3/2025	Cattle	99.70	0	SAT1	III	None	None
1591374	SWZ07/2026	Bovine	99.54	0	SAT1	III	None	None
1613173	SAR/6/2025	Pig	99.54	0	SAT1	III	None	None
1504221	SWZ18/2025	Bovine	99.24	0	SAT1	III	None	None
1591372	SWZ05/2026	Bovine	99.24	1	SAT1	III	None	None
1373865	BOT01/2026	Bovine	98.63	0	SAT1	III	None	None
FMDV VP1 Prototype Sequences*								
3410	BOT/1/68	Cattle	84.24	0	SAT1	III	None	None
11174	MOZ/P13/2010_MOR-16	African Buffalo	76.77	0	SAT1	XIII	None	None
19096	ZIM/23/2003	African Buffalo	75.75	0	SAT1	I	None	None

* see http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains

Virus sample: BOT57/2026

Sample details

Reception Date:	2026-04-12
Sender reference:	BOT57/2026
Location of origin:	Ramatlabama, Barolong, Southern District
Country of origin:	Botswana
Date of collection:	2026-04-07
Host species:	bovine

Genotyping details

Serotype:	SAT1
Topotype:	III
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	657
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591369	BOT54/2026	Bovine	99.39	0	SAT1	III	None	None
1613175	SAR/8/2025	Cattle	99.39	0	SAT1	III	None	None
1613174	SAR/7/2025	Cattle	99.24	0	SAT1	III	None	None
1591373	SWZ06/2026	Bovine	99.09	0	SAT1	III	None	None
1613172	SAR/3/2025	Cattle	99.09	0	SAT1	III	None	None
1591374	SWZ07/2026	Bovine	98.94	0	SAT1	III	None	None
1613173	SAR/6/2025	Pig	98.94	0	SAT1	III	None	None
1504221	SWZ18/2025	Bovine	98.63	0	SAT1	III	None	None
1591372	SWZ05/2026	Bovine	98.63	1	SAT1	III	None	None
1373865	BOT01/2026	Bovine	98.02	0	SAT1	III	None	None
FMDV VP1 Prototype Sequences*								
3410	BOT/1/68	Cattle	84.24	0	SAT1	III	None	None

* see http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains

Virus sample: BOT58/2026

Sample details

Reception Date:	2026-04-12
Sender reference:	BOT58/2026
Location of origin:	Ramatlabama, Barolong, Southern District
Country of origin:	Botswana
Date of collection:	2026-04-07
Host species:	bovine

Genotyping details

Serotype:	SAT1
Topotype:	III
Lineage:	None
Sublineage:	None

Sequencing details

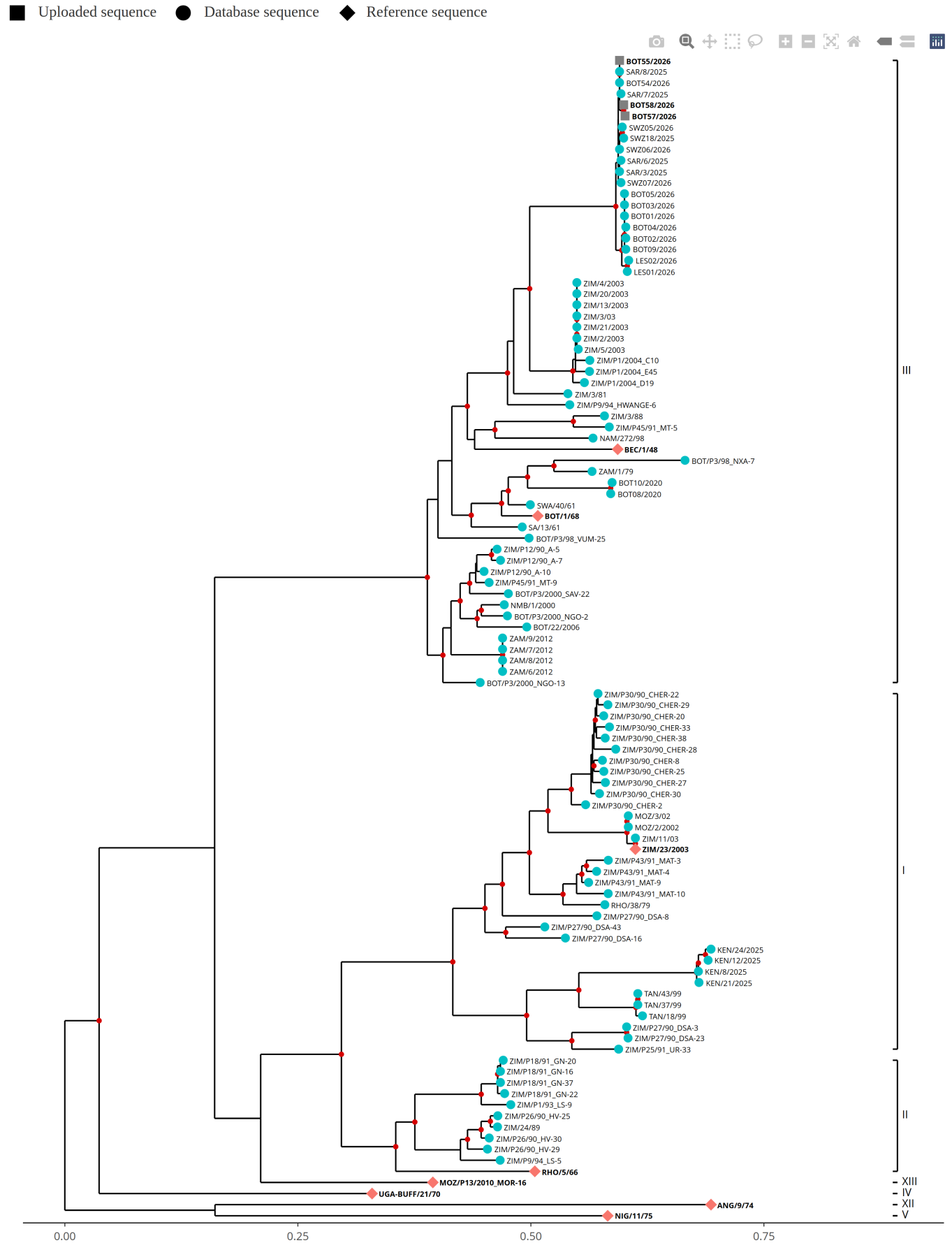
Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	657
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591369	BOT54/2026	Bovine	99.54	0	SAT1	III	None	None
1613175	SAR/8/2025	Cattle	99.54	0	SAT1	III	None	None
1613174	SAR/7/2025	Cattle	99.39	0	SAT1	III	None	None
1591373	SWZ06/2026	Bovine	99.24	0	SAT1	III	None	None
1613172	SAR/3/2025	Cattle	99.24	0	SAT1	III	None	None
1591374	SWZ07/2026	Bovine	99.09	0	SAT1	III	None	None
1613173	SAR/6/2025	Pig	99.09	0	SAT1	III	None	None
1504221	SWZ18/2025	Bovine	98.78	0	SAT1	III	None	None
1591372	SWZ05/2026	Bovine	98.78	1	SAT1	III	None	None
1373865	BOT01/2026	Bovine	98.17	0	SAT1	III	None	None
FMDV VP1 Prototype Sequences*								
3410	BOT/1/68	Cattle	84.09	0	SAT1	III	None	None

* see http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains

Tree


Uploaded sequence
Database sequence
Reference sequence
BOT55/2026
SAR/8/2025
BOT54/2026
SAR/7/2025
BOT58/2026
BOT57/2026
SWZ05/2026
SWZ18/2025
SWZ06/2026
SAR/6/2025
SAR/3/2025
SWZ07/2026
BOT05/2026
BOT03/2026
BOT01/2026
BOT04/2026
BOT02/2026
BOT09/2026
LES02/2026
LES01/2026
ZIM/4/2003
ZIM/20/2003
ZIM/13/2003
ZIM/3/03
ZIM/21/2003
ZIM/2/2003
ZIM/5/2003
ZIM/P1/2004_C10
ZIM/P1/2004_E45
ZIM/P1/2004_D19
ZIM/3/81
ZIM/P9/94_HWANGE-6
ZIM/3/88
ZIM/P45/91_MT-5
NAM/272/98
BEC/1/48
BOT/P3/98_NXA-7
ZAM/1/79
BOT10/2020
BOT08/2020
SWA/40/61
BOT/1/68
SA/13/61
BOT/P3/98_VUM-25
ZIM/P12/90_A-5
ZIM/P12/90_A-7
ZIM/P12/90_A-10
ZIM/P45/91_MT-9
BOT/P3/2000_SAV-22
NMB/1/2000
BOT/P3/2000_NGO-2
BOT/22/2006
ZAM/9/2012
ZAM/7/2012
ZAM/8/2012
ZAM/6/2012
BOT/P3/2000_NGO-13
ZIM/P30/90_CHER-22
ZIM/P30/90_CHER-29
ZIM/P30/90_CHER-20
ZIM/P30/90_CHER-33
ZIM/P30/90_CHER-38
ZIM/P30/90_CHER-28
ZIM/P30/90_CHER-8
ZIM/P30/90_CHER-25
ZIM/P30/90_CHER-27
ZIM/P30/90_CHER-30
ZIM/P30/90_CHER-2
MOZ/3/02
MOZ/2/2002
ZIM/11/03
ZIM/23/2003
ZIM/P43/91_MAT-3
ZIM/P43/91_MAT-4
ZIM/P43/91_MAT-9
ZIM/P43/91_MAT-10
RHO/38/79
ZIM/P27/90_DSA-8
ZIM/P27/90_DSA-43
ZIM/P27/90_DSA-16
KEN/24/2025
KEN/12/2025
KEN/8/2025
KEN/21/2025
TAN/43/99
TAN/37/99
TAN/18/99
ZIM/P27/90_DSA-3
ZIM/P27/90_DSA-23
ZIM/P25/91_UR-33
ZIM/P18/91_GN-20
ZIM/P18/91_GN-16
ZIM/P18/91_GN-37
ZIM/P18/91_GN-22
ZIM/P1/93_LS-9
ZIM/P26/90_HV-25
ZIM/24/89
ZIM/P26/90_HV-30
ZIM/P26/90_HV-29
ZIM/P9/94_LS-5
RHO/5/66
MOZ/P13/2010_MOR-16
UGA-BUFF/21/70
ANG/9/74
NIG/11/75
III
I
II
XIII
IV
XII
V
0.00
0.25
0.50
0.75

Analysis Parameters

Query sequence set: WRLMEG/2026/000018
Number of related sequences reported: 94
Number of prototype sequences in tree: 8
Minimal VP1 subsequence match length: 610
Sequence alignment length: 669

Number of sequences in tree capped at: 100
Sequence alignment method: MAFFT 7.522
Phylogeny reconstruction method: IQ-TREE 2.26
Number of bootstrap samples: 1000
Displaying bootstrap values above: 75

FMDV VP1 Sequences included in the Phylogenetic Tree

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
MOZ/2/2002	None		WRLFMD	Mozambique	SAT1/I	None
MOZ/3/02 *	DQ009720		OVI	Mozambique	SAT1/I	None
NAM/272/98 *	KJ999921	African Buffalo	OVI	Namibia	SAT1/III	None
NMB/1/2000	None	Bovine	WRLFMD	Namibia	SAT1/III	None
RHO/38/79	None	Cattle	WRLFMD	Rhodesia	SAT1/I	None
KEN/8/2025	None	Bovine	WRLFMD	Kenya	SAT1/I	None
KEN/12/2025	None	Bovine	WRLFMD	Kenya	SAT1/I	None
KEN/21/2025	None	Bovine	WRLFMD	Kenya	SAT1/I	None
KEN/24/2025	None	Bovine	WRLFMD	Kenya	SAT1/I	None
BOT01/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT02/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT03/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT04/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT05/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
SA/13/61 *	AY593842	Cattle	PIADC	South Africa	SAT1/III	15858032
SWA/40/61 *	AY593843		PIADC	South West Africa	SAT1/III	15858032
SWZ18/2025 *	None	Bovine	BVI	Eswatini	SAT1/III	None
TAN/18/99	KF561713	Cattle	WRLFMD	Tanzania	SAT1/I	None
TAN/37/99 *	AY442005	Cattle	OVI	Tanzania	SAT1/I	17187294
TAN/43/99	KF561719	Cattle	WRLFMD	Tanzania	SAT1/I	None
BOT09/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT54/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
LES01/2026 *	None	Bovine	BVI	Lesotho	SAT1/III	None
LES02/2026 *	None	Bovine	BVI	Lesotho	SAT1/III	None
SWZ05/2026 *	None	Bovine	BVI	Eswatini	SAT1/III	None
SWZ06/2026 *	None	Bovine	BVI	Eswatini	SAT1/III	None
SWZ07/2026 *	None	Bovine	BVI	Eswatini	SAT1/III	None
SAR/3/2025	None	Cattle	WRLFMD	South Africa	SAT1/III	None
SAR/6/2025	None	Pig	WRLFMD	South Africa	SAT1/III	None
SAR/7/2025	None	Cattle	WRLFMD	South Africa	SAT1/III	None
SAR/8/2025	None	Cattle	WRLFMD	South Africa	SAT1/III	None
ZAM/1/79	None		WRLFMD	Zambia	SAT1/III	None
ZAM/6/2012	None	Bovine	WRLFMD	Zambia	SAT1/III	None
ZAM/7/2012	None	Bovine	WRLFMD	Zambia	SAT1/III	None
ZAM/8/2012	None	Bovine	WRLFMD	Zambia	SAT1/III	None
ZAM/9/2012	None	Bovine	WRLFMD	Zambia	SAT1/III	None
ZIM/11/03 *	KJ999927	African Buffalo	OVI	Zimbabwe	SAT1/I	None
ZIM/13/2003	None		WRLFMD	Zimbabwe	SAT1/III	None
ZIM/2/2003	None	Bovine	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/20/2003	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/21/2003	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/24/89	None	Cattle	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/3/03 *	KJ999926	Cattle	OVI	Zimbabwe	SAT1/III	None
ZIM/3/81	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/3/88	MT385529	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/4/2003	None		WRLFMD	Zimbabwe	SAT1/III	None
ZIM/5/2003	None		WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P1/2004_C10	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P1/2004_D19	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P1/2004_E45	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P1/93_LS-9	MT385600	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P12/90_A-10	MT385532	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P12/90_A-5	MT385530	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P12/90_A-7	MT385531	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P18/91_GN-16	MT385572	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-20	MT385574	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-22	MT385575	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-37	MT385579	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P25/91_UR-33	MT385586	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P26/90_HV-25	MT385538	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-29	MT385541	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-30	MT385542	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None

FMDV VP1 Sequences included in the Phylogenetic Tree *(continued)*

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
ZIM/P27/90_DSA-16	MT385545	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P27/90_DSA-23	MT385548	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P27/90_DSA-3	MT385543	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P27/90_DSA-43	MT385553	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P27/90_DSA-8	MT385544	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-2	MT385555	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-20	MT385558	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-22	MT385559	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-25 *	GU194499	African Buffalo	OVI	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-27	MT385561	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-28	MT385562	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-29	MT385563	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-30	MT385564	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-33	MT385565	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-38	MT385566	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-8	MT385556	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P43/91_MAT-10	MT385592	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P43/91_MAT-3	MT385588	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P43/91_MAT-4	MT385589	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P43/91_MAT-9	MT385591	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P45/91_MT-5	MT385594	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P45/91_MT-9	MT385596	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P9/94_HWANGE-6	MT385605	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P9/94_LS-5	MT385606	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
BOT/22/2006	None	African Buffalo	WRLFMD	Botswana	SAT1/III	None
BOT/P3/2000_NGO-13	None	African Buffalo	WRLFMD	Botswana	SAT1/III	None
BOT/P3/2000_NGO-2	None	African Buffalo	WRLFMD	Botswana	SAT1/III	None
BOT/P3/2000_SAV-22	None	African Buffalo	WRLFMD	Botswana	SAT1/III	None
BOT/P3/98_NXA-7	None	African Buffalo	WRLFMD	Botswana	SAT1/III	None
BOT/P3/98_VUM-25	None	African Buffalo	WRLFMD	Botswana	SAT1/III	None
BOT08/2020 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT10/2020 *	None	Bovine	BVI	Botswana	SAT1/III	None

* Not a WRLFMD Reference Number;

- Not Available