

Risk Evaluation Principles on International Movement of Horses for Competition- Hong Kong Experience

***Kenneth Lam BSc(Hons), BVetMed, PhD, CertVA, MRCVS
Executive Manager, International Veterinary Liaison & Epidemiology
Hong Kong Jockey Club
WOAH IHSC***



Acknowledgements

- WOAHA
- International Horse Sports Confederation
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- Hong Kong SAR Government Agriculture, Fisheries and Conservation Department
- Harbin Veterinary Research Institute
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Outline of the Talk

- Lessons learnt in equine disease outbreaks
- Risk Assessment Approach for International Movement of horses for competition
 - **Public Private Partnership**
 - **Government Veterinary Authority & Horse Industry**
- Risk Management
 - Structured Equine Infectious Disease Control Strategy
- Discussion and Take Home Message



Lessons learnt from Equine Influenza Outbreaks

[Emerg Infect Dis. 2019 Jun; 25\(6\): 1185–1191](#)

- **El outbreaks**

- Australia (2007)
- Japan (2007)
- South Africa (2003 and 1986)
- Newmarket UK (2003)
- Hong Kong (1992)
- China, France, Germany, Ireland, Malaysia, Sweden, the United Kingdom, and the United States (2015- 2017)



- **Critical Control Point**

- Importance of Pre-Export and Post-Arrival EI screening tests

Outbreak of the neurological form of Equine Herpes Virus (EHV-1) in Spain in February 2021, which resulted in the deaths of 18 horses in mainland Europe and confirmed related cases in 10 countries: Belgium, Denmark, France, Germany, Italy, Qatar, Spain, Slovakia, Sweden and Switzerland.

2) In France in November 2024

Important update on the Equine Herpes Virus-1 (EHV-1) outbreak in France

MEDIA UPDATES →

22 November 2024 | Author: FEI



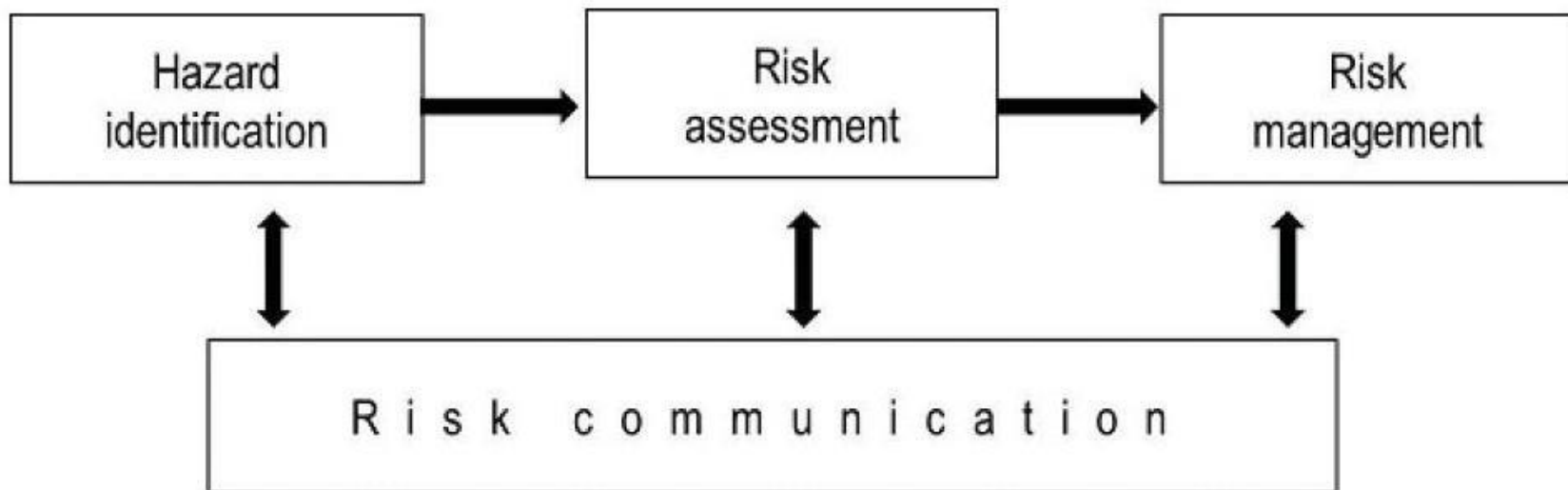
The FEI Veterinary Department would like to alert the equestrian community to an Equine Herpes Virus-1 (EHV-1) neurological outbreak in France.

The outbreak is linked to a national event that took place in Le Mans on 1–3 November 2024 and as of 20 November, has resulted in fatalities, and cases in three different French departments.

An FEI event took place at the same venue in the following week (8-11 November 2024). The FEI horses were housed in different stables than the horses competing in the national event and there were no direct contacts between the national and FEI horses at Le Mans.

The 4 Components of Risk Analysis on Biosecurity Systems

WOAH Terrestrial Animal Health Code Chapter 2.1



Racing Thoroughbred

International Racing Circuit Experience in
countries with established equine health status

- UK
- France
- Ireland
- Dubai UAE
- Qatar
- Bahrain
- Saudi Arabia
(pending)
- USA
- Australia
- New Zealand
- South Korea
- Japan
- Hong Kong

Current International Racehorse Movement Guidelines

International Movement of Horses Committee of
The International Federation of Horseracing Authorities (IFHA)

- Racing Thoroughbreds
 - The guidelines to facilitate the temporary movement of registered racehorses for international races (2002)
 - IFHA Transportation Welfare Guidelines (2023)

<https://www.ifhaonline.org/default.asp?section=About%20IFHA&area=26>



WOAH listed diseases of importance for horses

- 1. African horse sickness (AHS)
- 2. Anthrax
- 3. Contagious equine metritis (CEM)
- 4. Dourine
- 5. Equine infectious anemia (EIA)
- 6. Equine influenza (EI)
- 7. Equine viral arteritis (EVA)
- 8. Glanders
- 9. Japanese encephalitis (JE)
- 10. Infection with equid herpesvirus-1 (EHV-1)
- 11. Venezuelan equine encephalomyelitis (VEE)
- 12. Equine piroplasmiasis
- 13. Rabies
- 14. Screwworm myiasis
- 15. Surra
- 16. Eastern equine encephalomyelitis (EEE)
- 17. Western equine encephalomyelitis (WEE)
- 18. West Nile fever (WNF)
- 19. Infection with Nipah virus (multiple species)

IFHA listed diseases of potential concern for the equine industry (Not covered under WOAAH):

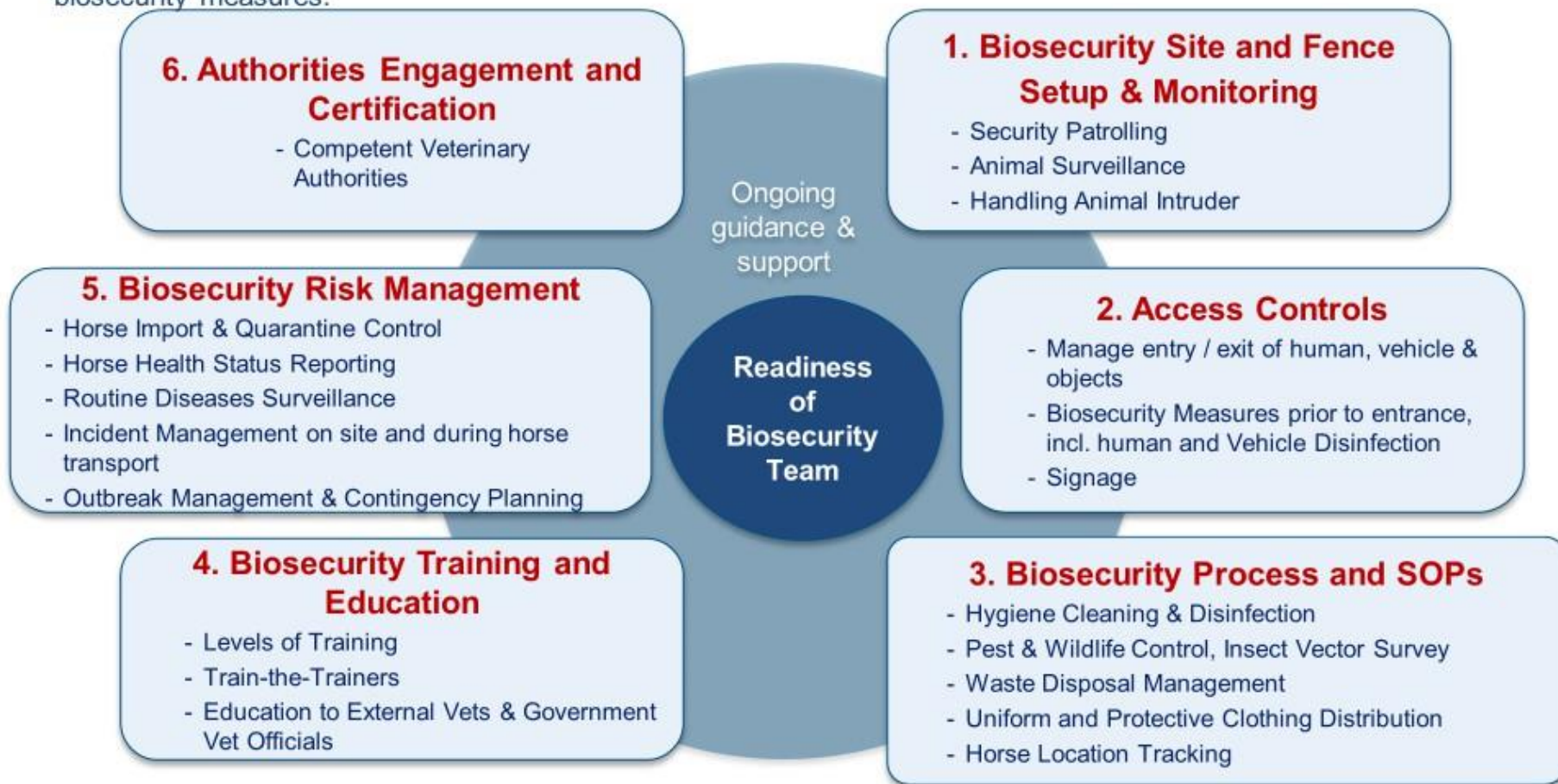
- 1. Strangles
- 2. Epizootic lymphangitis
- 3. Vesicular stomatitis
- 4. Infection with Hendra virus
- 5. Horse mange
- 6. Horsepox
- 7. Tetanus
- 8. Getah virus
- 9. Equine Encephalosis
- 10. Ringworm

Infectious Disease Control Concept

- Broader concept of 'biosecurity' with an emphasis on Managed Risk, not Zero Risk
- An integrated biosecurity approach
 - Import Risk assessment and monitoring, surveillance and response at
 - pre-border (Home stables)- test requirements
 - at the border port (air/ sea/ road transport)
 - post-border (Post-arrival venue)

Biosecurity Activities Overview

Biosecurity is a set of measures designed to protect an animal population within a specific facility or region from the entry and spread of diseases. Different activities are prepared and implemented to realise and enforce the biosecurity measures.



Post Arrival Horse Transit Biosecurity Protocol

Direct transfer from airport to competition venue



Competition horses in post-arrival venue Stable and Exercise Facility



Biosecurity Strategy for post arrival health monitoring at international competition events

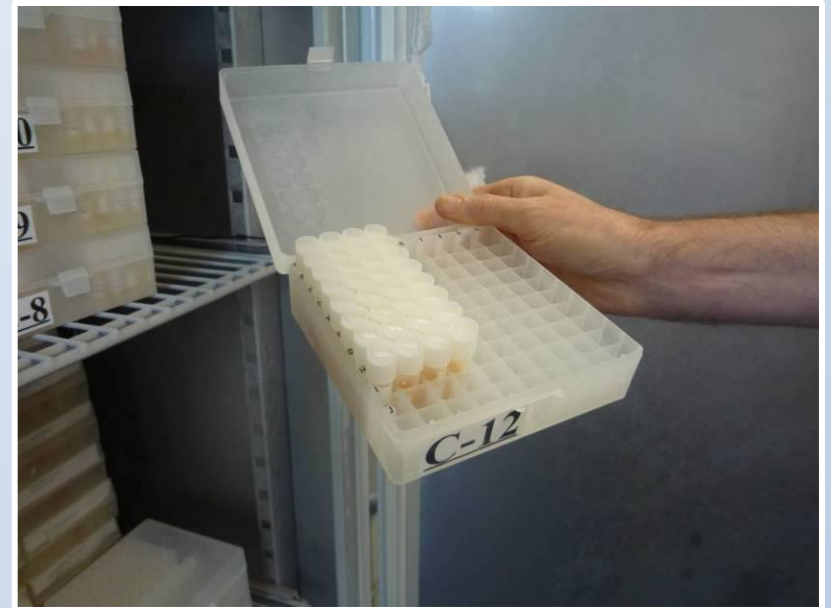
- General Active Surveillance to detect infectious disease
 - Twice Daily Rectal Temperature Recording to detect fever cases ($> 39^{\circ}\text{C}$)

Record ID	Import Date	Horse Name	FEI Passport No	Country of PEQ	Place of PEQ	Stable BLOCK No	Stable BOX No
1	26-Jul-08	Gazelle de la Brasserie CH	SUI07963	Amsterdam		1N	20

Day	Date	TempAM	TempPM	Celsius	Pyrexia	Comments treatment
1	26-Jul-08	37.7	37.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	27-Jul-08	37.5	37.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	28-Jul-08	37.5	37.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4	29-Jul-08	37.5	37.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5	30-Jul-08	37.5	37.7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6	31-Jul-08	37.8	37.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	01-Aug-08	37.5	37.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8	02-Aug-08	37.5	37.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	03-Aug-08	37.5	37.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10	04-Aug-08	37.7	37.7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11	05-Aug-08	37.4	37.3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12	06-Aug-08	37.7	37.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13	07-Aug-08	37.5	37.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
14	08-Aug-08	37.5	37.7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



Reference Serum Collection within 24 hours Post Arrival





PEDEN BLOODSTOCK

7 horses

Changing Room	1	3	5	7	9	11	13	15	17	Tack Room	Tack Room
	JPN Marquis D P	JPN Nid'or D B	JPN Jenny black	JPN Udarylis	JPN Niels	JPN Olga	JPN Wesley S				
Japan origin horses x 7 - whole stable block											
Wash bay										Wash bay	Wash machine ice maker
	2	4	6	8	10	12	14	16	18	19	

10 horses

	1	3	5	7	9	11	13	15	17			
Changing Room	TPE	Tack Room	CHN Coertis	CHN Heraldo	CHN Caro C				CHN Cortez 35	CHN Tack Room	CHN Tack Room	

China domestic x 16 - whole stable block

		CHN Lauxley D B	CHN Solgrana	CHN Thunder Bolt	CHN Cervanto2	CHN Zhen D Y	CHN Sigin T	CHN Tack Room	Wash bay	Wash machine ice maker
Wash bay	2	4	6	8	10	12	14	16	18	19

6 horses

Changing Room	1	3	5	7	9	11	13	15	17	MAS Tack Room	
	SYR Wonderboy	SYR Tack Room	MAS Manila VDL	MAS Linus	MAS Tack Room	MAS Odurin					
European Union Dressage, Eventers& Jumpers x 16											
Wash bay	BRN Tennessee	BRU Rodolf Z	BRN & BRU TPE Tack Room		KAZ Tack Room					Wash bay	Wash machine ice maker
	2	4	6	8	10	12	14	16	18	19	

8 horses

Changing Room	1 JPN Ticanaf	3 JPN Off the road	5 JPN Asterix	7 HKG Cadeno Z	9 HKG JC Crumship	11	13	15	17	HKG Tack Room	HKG Tack Room
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European Union Dressage, Eventers& Jumpers x 17

PEDEN BLOODSTOCK

8 horses

Changing Room	1	3	5	7	9	11	13	15	17	TPE	Tack Room
	IND London O	IND & THA Tack Room		KSA Melodia A	KSA Bayard		KSA Mobily A A C	KSA Tack Room	TPE Plattini VDL		
European Union Dressage, Eventers& Jumpers x 16											
Wash bay						TPE Tack Room	TPE Cobos	TPE Item D Q	TPE Quin Chin	Wash bay	Wash machine Ice maker
	2	4	6	8	10	12	14	16	18		

9 horses

Changing Room	1	3	5	7	9	11	13	15	17	UAE Tack Room	QAT Tack Room
	SIN Claim collin	SIN & QAT Tack Room	QAT Tack Room	UAE Co-Jack	UAE Piccibello W	UAE Tack Room	UAE Dubai's P	UAE Kalaska De S			
European Union Dressage, Eventers& Jumpers x 16											
Wash bay	QAT Ambielite	QAT Dukhan	QAT Logo 28	QAT Castlanone	QAT Tack Room					Wash bay	Wash machine Ice maker
	2	4	6	8	10	12	14	16	18	19	

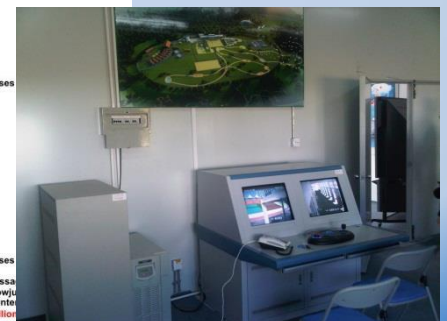
13 horses

Changing Room	1	3	5	7	9	11	13	15	17	THA Tack Room	Tack Room
	KRA Castle	KOR Sun Fire 2	KOR Centurio 25	KOR Qualita D G H	KOR Dark secret	KOR Tack Room	KOR Heaps O H				
Korea horses x 14 & THA origin horses x 2 - whole stable block											
Wash bay	KOR Lido D B	KOR Rizzo	KOR Pleasure 18	KOR Laura	KOR Thomas O'M	KOR Dragon 85	KOR Lutina D B	KOR Tack Room		Wash bay	Wash machine ice maker
	2	4	6	8	10	12	14	16	18		

horses

Changing Room	1	3	5	7	9	11	13	15	17	Tack Room	Tack Room
Wash bay	2	4	6	8	10	12	14	16	18	Wash bay	Tack Room

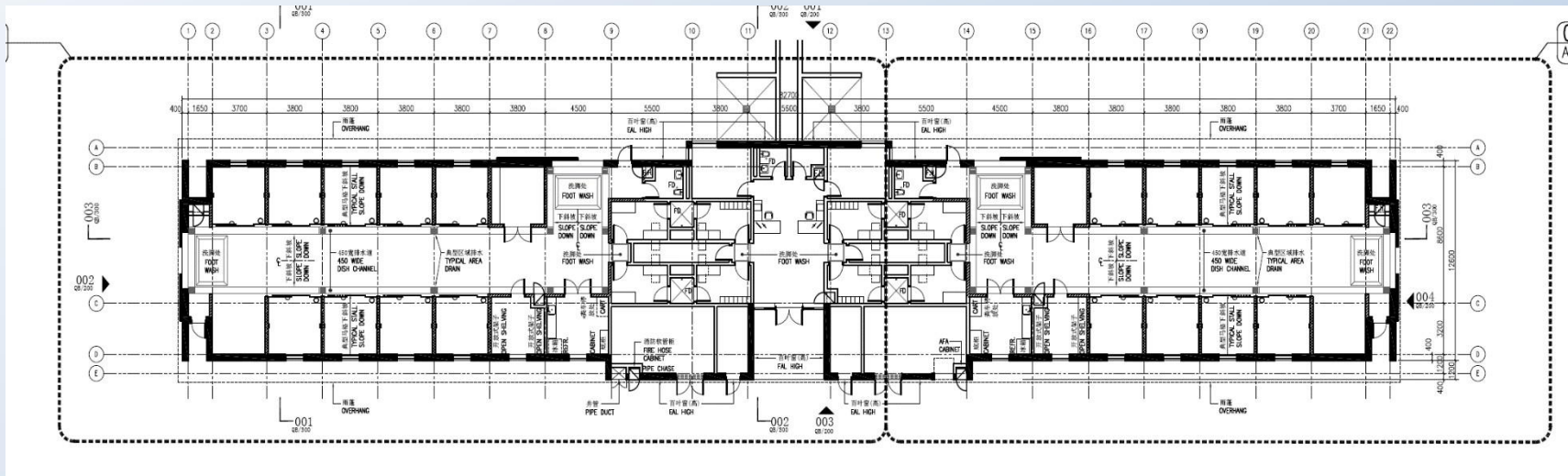
61 Total horses



Stable Management and Traceability

Isolation Stable

- Separate stable facility for isolation of potential infectious horse(s) to protect the remaining visiting competition horses



Import Biosecurity Risk Assessment

- **Hazard Analysis and Critical Control Points Approach in Veterinary Services**
 - Biosecurity Operation
 - Management
 - Movement Control
 - Biosecurity Measures
 - **Population Disease Surveillance**



Pre-export Risk Evaluation

- TEMPORARY International Horse Movement
 - Group/ Listed/ Graded International Thoroughbred Races
 - No Pre-export quarantine requirement for international runners from Scheduled List of Countries to Hong Kong
 - Australia, Canada, France, Germany, Italy, Japan, New Zealand, the Republic of Ireland, the United Arab Emirates, Qatar, Bahrain, South Korea, the United Kingdom (Great Britain & Northern Ireland) and the United States of America.

Risk Assessment of Exporting Countries Emerging & Re-emerging Diseases

<https://equinesurveillance.org/iccview/>



**International Collating
Centre**



[Overview](#) [Period Report Tables - all diseases per country](#) [Disease analysis - Country-level](#) [Disease analysis - Region-level](#)
[Country Level Reports - all diseases](#) [Resources and Archive](#)

Period based summary of the number of outbreaks reported per disease categorised by country and body system affected

Select report date range of interest

1 Jan 2019 to 5 Dec 2023

Load and see disease tables from this period



Post-arrival Risk Evaluation

- Post Arrival Isolation of Visiting competition horses from Local Horse Population
 - Additional Health Test Requirements
 - Naso-pharyngeal swab for Equine Influenza and Strangles (*Streptococcus equi subspecies equi*) screening tests
- Temporary Import
 - Access to Training Tracks
 - Separation from local population in training

ESPLINE Influenza A&B-N

Reagent for detection of influenza A & B virus antigens



Procedures

With simple procedures, the interpretation can be done 15 minutes later.

It takes only 15 minutes from collecting a sample to obtaining the measurement result. The reduced test time enables to reduce patient's load and conduct an efficient test. In conducting the procedures, confirm precautions on the procedures and use the method written in the attached document.

Sample extraction Procedure



Shake the accessory squeeze tube in the kit and drop off the processing solvent attaching at the top seal.



Hold the neck part of the squeeze tube and peel off the top seal.



Soak a swab with a sample collected in the processing solvent and put the swab part between the fingers from the periphery of the squeeze tube. Turn the swab about ten times and extract the sample.



Next, press the swab part at a position shown in the picture slightly hard. As the solution is rubbed out, take out the swab and make the solution the sample solution.



Hold the neck part of the squeeze tube surely. Because a filter is mounted, always use the dropping tube.

Measurement method



As for dropping amount of the sample solution, observe two drops strictly.

Pipette 2 drops (about 30μL) on the purple sample window in the reaction cassette. Avoid for the drop tip to touch the cassette and sample-drop part. Also avoid for bubbles to enter.



Press the convex part quickly to start the reaction.



Confirm that the convex part was pushed in completely.

after 15 minutes

Interpretation

Judge for presence or absence of a line (blue color) at the interpretation part macroscopically.



In case that the interpretation is conducted after 15 minutes or later.

At 15 minutes, pipette three drops of a reaction stopping solution on the purple sample window and conduct the judgment within 2 hours.

Biosecurity Risk Management

- **Personnel Movement into and out of Competition Venue (Stables)**
- **Potential Contaminated Clothing & Equipment**
 - Vets & Farriers
 - Flying grooms
 - Stable Assistants
 - Work Riders, Jockeys
 - Visitors
 - Officials

Why is Hong Kong Jockey Club concerned about Equine Influenza risks ?

Biosecurity Risk Management

Biosecurity separation of Visiting competition horses from local horse population

1 km

Local horse stables

Human Movement and Air Borne Risks



Take Home Message (1)

- **Biosecurity Import Risk Assessment to protect both Visiting and Local Horse population**
 1. Perimeter Security of stable facilities
 2. Human Entry Points
 3. Vehicle Entry/ Exit Points
 4. Isolation Stables
 5. Vector Control
 6. Transportation between stables/
competition venue and Port of Export
 7. Biosecurity Education and Awareness

TAKE HOME MESSAGE (2)

- Clear and Precise Standard Biosecurity Operating Procedures & Contingency Plan
- Auditable Processes with Check Lists
- Clear Line of Official Reporting Procedures
- Effective Management Network with Practical Governance by Competent Veterinary Authority

What could happen with no effective official veterinary services system for international movement of horses?



THANK YOU