



VIET NAM

Avian Influenza

Diagnosis

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At the field level

- Clinical and pathological signs
- Epidemiological characteristics



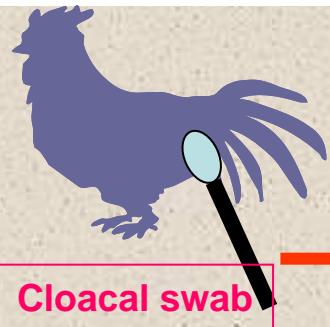


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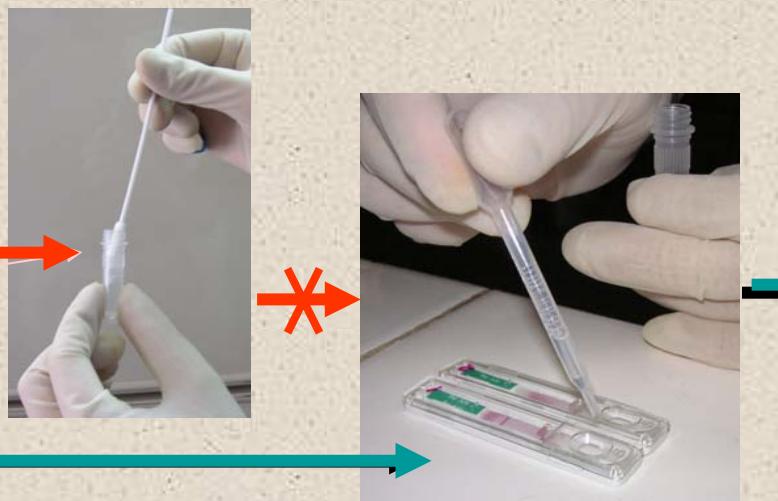


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Cloacal swab



Tissue homogenate

5 drops,
Reading after 15
min.



No 1: Positive
No 2: Negative

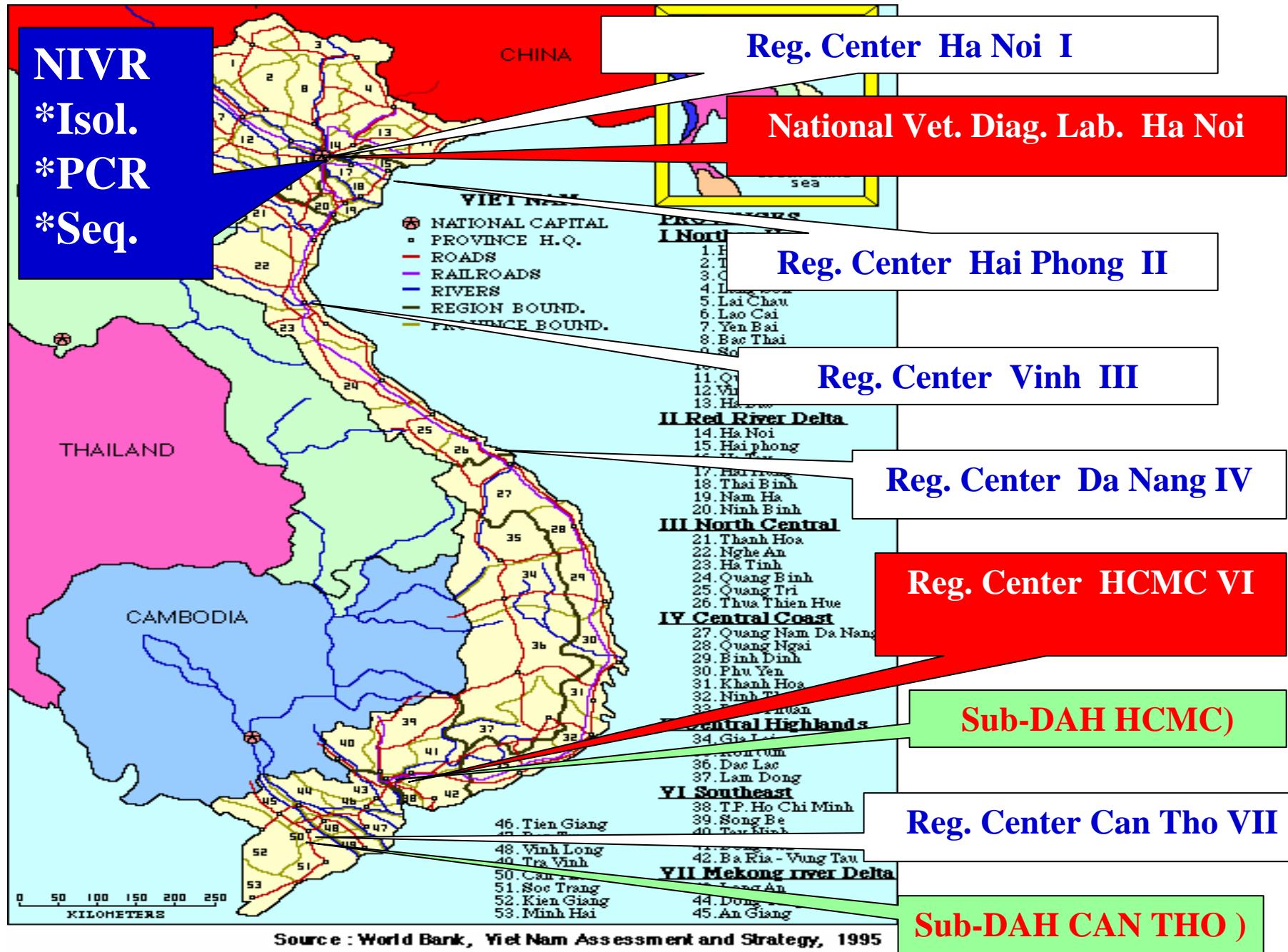
Fig. 1 Test procedure of SD Rapid Test

Virus titer/MDCK (log ₁₀ TCID ₅₀)	RT-PCR		Rapid test
	NP	H5 (Jap)	
4	P	P	P
3	P	P	N
2	P	P	N
1	P	P	N
0	P	N	N
0,1	N	N	N



Fig. 2 Sensitivity of SD Rapid Test compared with virus titer and RT-PCR

NIVR
*Isol.
*PCR
*Seq.



Methods of diagnosis in lab.

- **Serology:** HI all labs. for surveillance
- **Virology:**
- RT-PCR and RRT- PCR all 8 labs
 - M gen then HA and/or NA gene
- Isolation then HA and HI test: NIVR
- NI and sequencing : NIVR
- Virus neutralization test in TC: NIVR.

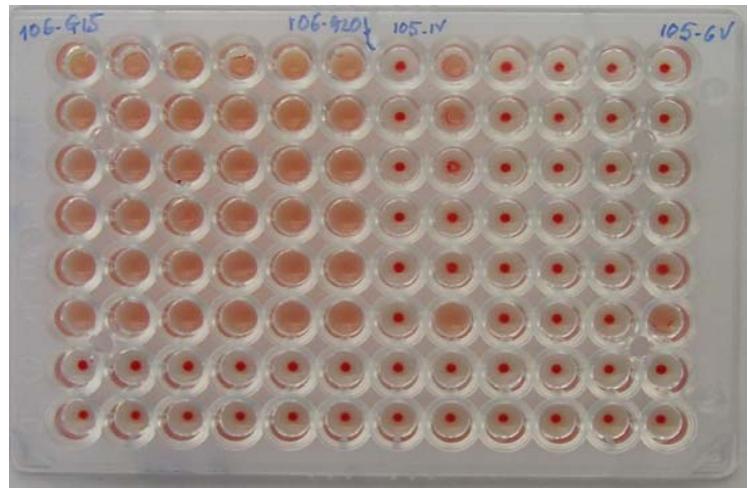
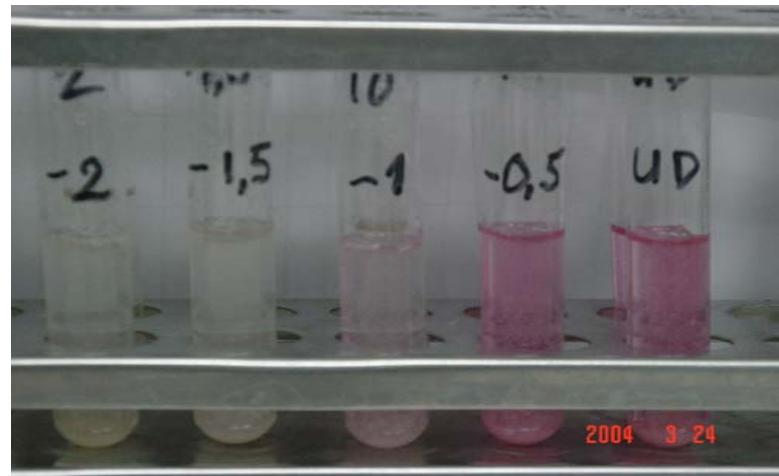
Minimum requirements

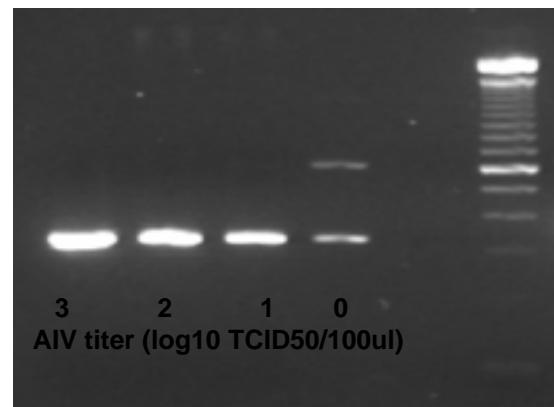
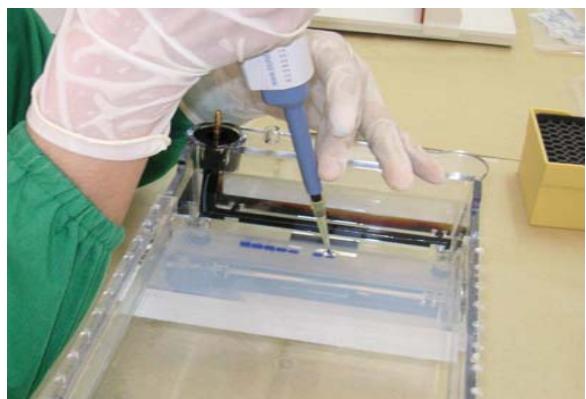
- ***For the conventional techniques (7-10 days)***
 - Lab conditions if the virus is to be isolated.
 - Standard sera anti-HA and anti-NA
- ***For the molecular technique (24 hours):***
 - Provision of reagents and skill.
 - A supporting lab.

Diagnosis

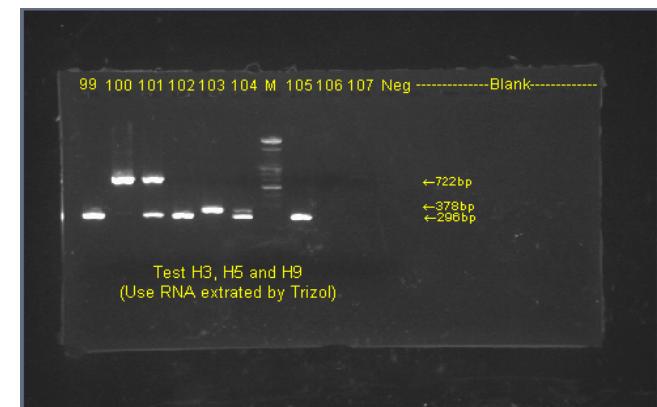


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Sensitivity



H3 H5 H9

2004.08.16





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Genome changes of the Vietnamese AI H5N1 isolates

Cleavage site patterns of the Vietnamese isolates

Type	Sequence	Isolate name
1	qrerrrkkr g	A/Chicken/VN/27/03
2	qrerr- k kr g	A/Dk/VNM/219/04
3	QRERI R KKRG	A/Ck/VNM/147/04
4	qrerrr- k rg	A/Dk/VNM/568/05
5	q re grkkrg	A/Dk/VNM/2/07

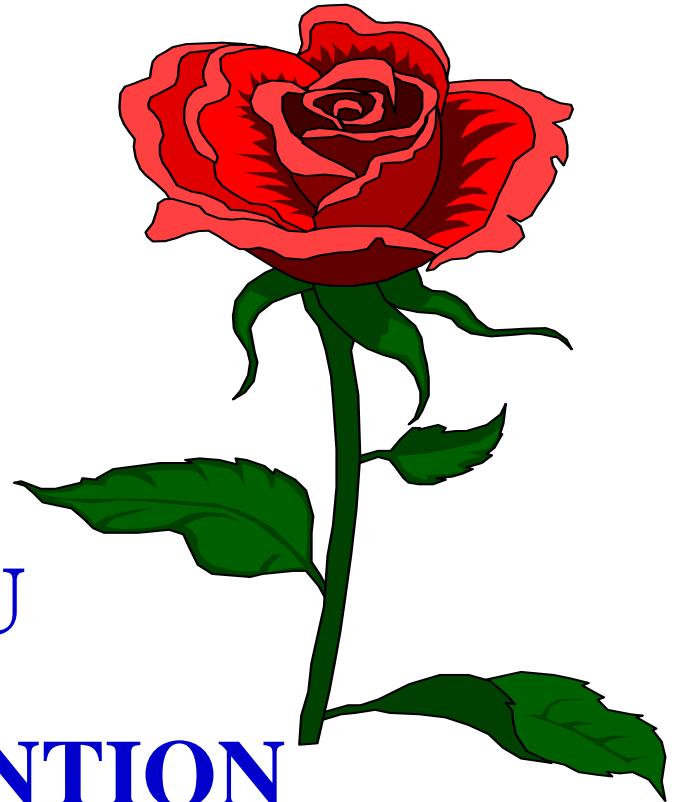
Cleavage site sequence of the 7 recent isolates

	320	330	340	350	360	370	380	390	400	-
HA-1-07	PLTIGECPKYVKSNRLVLTATGLRNSPQREGREKKRGLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAI	NGVTNKVNSIIDKMNTQF								
HA-2-07	PLTIGECPKYVKSNRLVLTATGLRNSPQREGREKKRGLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAI	DGVVTNKVNSIIDKMNTQF								
HA-4-07	PLTIGECPKYVKSNRLVLTATGLRNSPQREGREKKRGLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAI	DGVVTNKVNSIIDKMNTQF								
HA-5-07	PLTIGECPKYVKSNRLVLTATGLRNSPQREGREKKRGLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAI	DGVVTNKVNSIIDKMNTQF								
HA-6-07	PLTIGECPKYVKSNRLVLTATGLRNSPQREGREKKRGLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAI	DGVVTNKVNSIIDKMNTQF								
HA-7-07	PLTIGECPKYVKSNRLVLTATGLRNSPQREGREKKRGLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAI	DGVVTNKVNSIIDKMNTQF								
HA-8-07	PLTIGECPKYVKSNRLVLTATGLRNSPQREGREKKRGLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAI	DGVVTNKVNSIIDKMNTQF								





Modern or conventional method?



**THANK YOU
FOR YOUR ATTENTION**