POCKIT System

An Innovative Point-of-need PCR System

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Product Specialist from GeneReach

December, 6, 2018

Outline

- **TiLV detection by POCKIT system**

- **Technology**

- **PCR application**

- **Pipe line of POCKIT system**

- **Summary**

- **Operation Guide (hands-on-time)**

Overview of TiLV detection by POCKIT system

PetNAD nucleic acid co-prep kit

IQ plus TiLV kit on POCKIT micro plus

Nucleic Acid Extraction
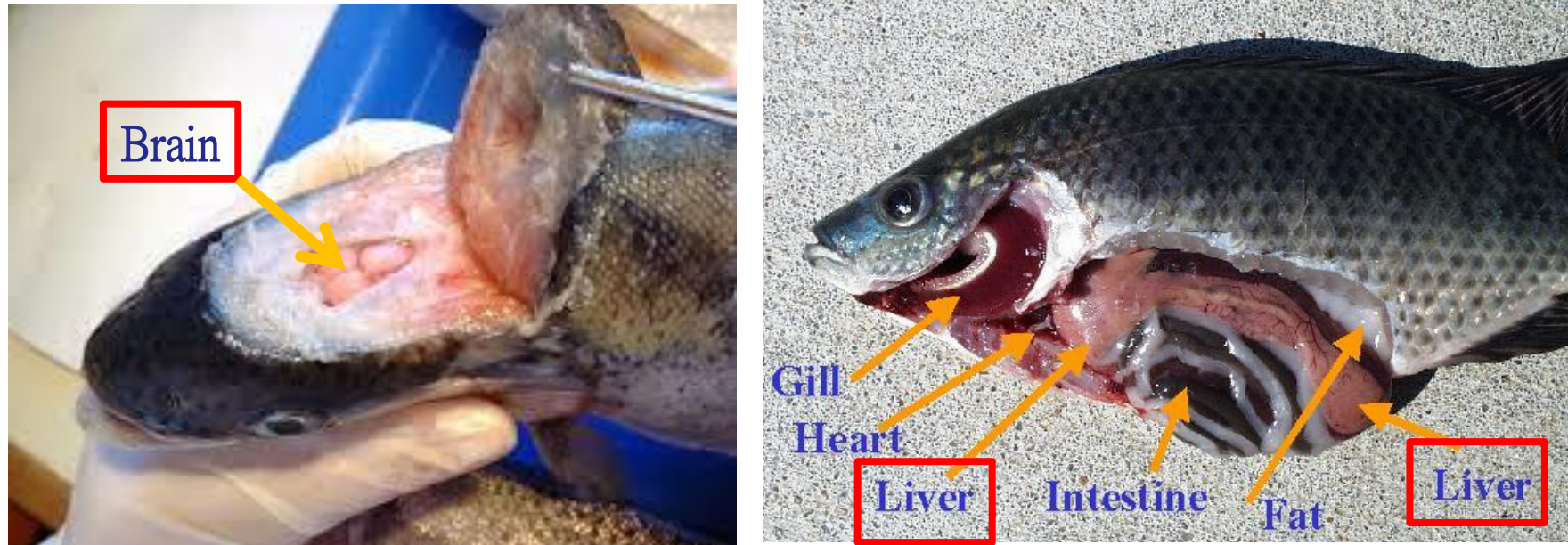
PCR detection

15-20 mins

42 mins

Content

- Sampling

- Nucleic Acid extraction system
  - PetNAD Nucleic Acid Co-prep kit

- PCR reaction
  - POCKIT micro plus
  - IQ plus TiLV kit

Sampling

- Sample type: Liver, Brain (or other potential source.)
- Fresh or Frozen sample

Sample preparation
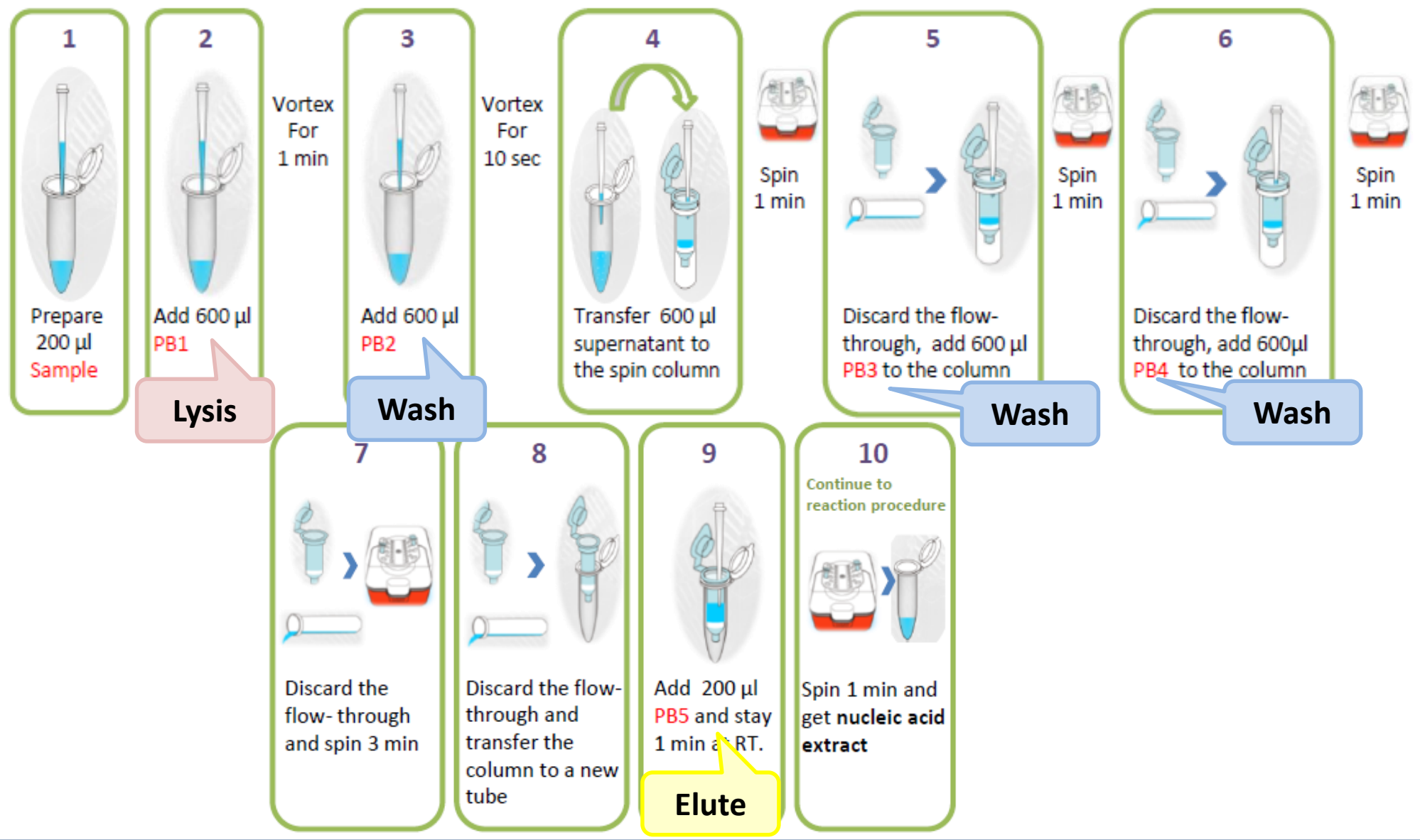
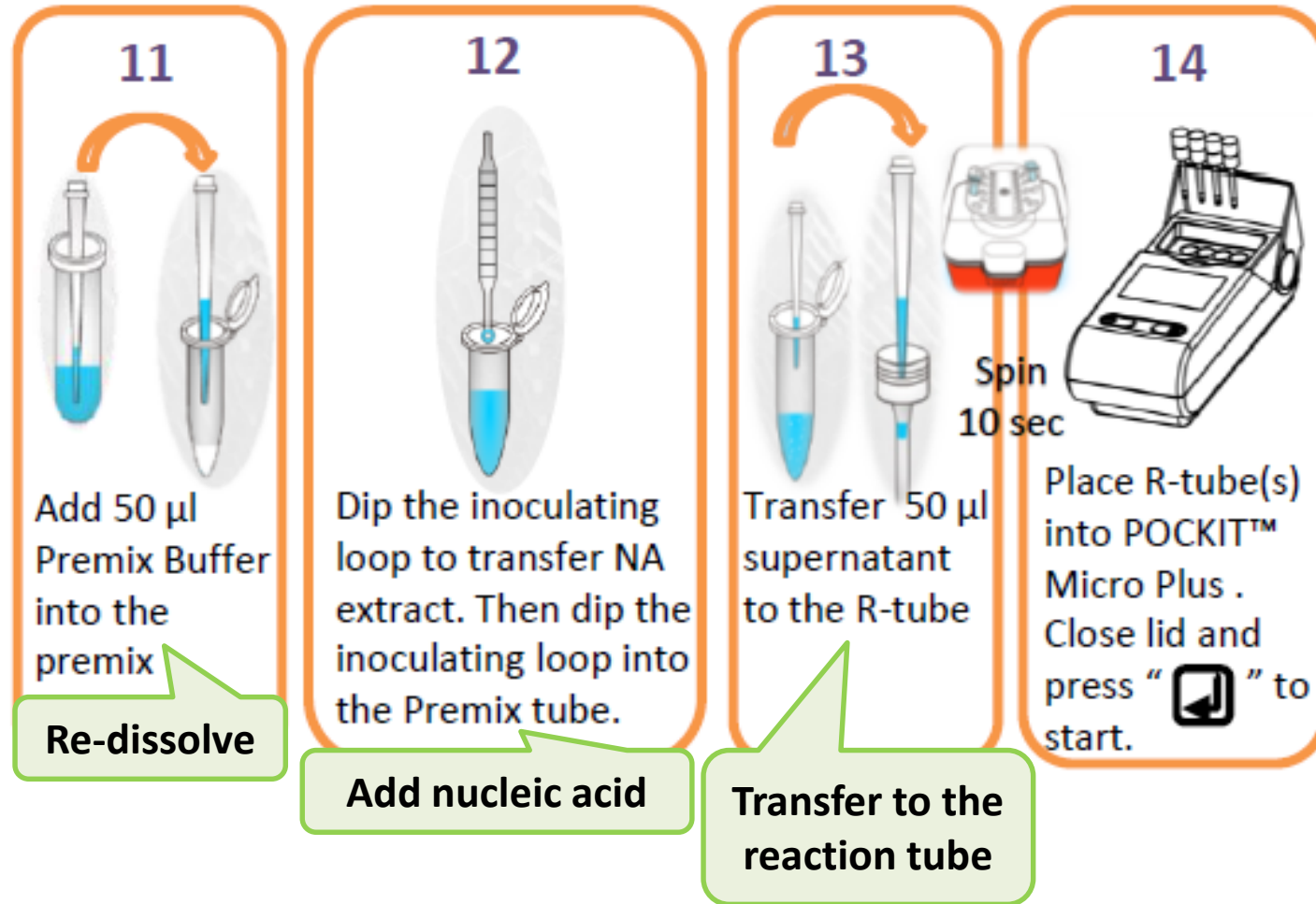40mg tissue + 500 ul PBS

↓

Grinding

↓

Centrifuge
(12000g for 3 min; cubee for 5 min)

↓

200ul supernatant
for nucleic acid extraction

11 Add 50 µl Premix Buffer into the premix

Re-dissolve

12 Dip the inoculating loop to transfer NA extract. Then dip the inoculating loop into the Premix tube.

Add nucleic acid

13 Transfer 50 µl supernatant to the R-tube

Spin 10 sec

Transfer to the reaction tube

14 Place R-tube(s) into POCKIT™ Micro Plus . Close lid and press " ⏎ " to start.

PetNAD
Nucleic Acid Co-prep Kit

Product Introduction

| Item	Volume	Note: Before first use
PB1	36 ml/bottle, 1 bottle	
PB2	1 ml/bottle, 1 bottle	Add 35 ml 95% ethanol before use
PB3	20 ml/bottle, 1 bottle	Add 20 ml 95% ethanol before use
PB4	15 ml/bottle, 1 bottle	Add 25 ml 95% ethanol before use
PB5	3 ml/bottle, 1 bottle	
Spin Column & Collection Tube	50 sets/bag, 1 bag	
User Manual	1 copy	

(50 tests/kit)

Note: Before first use, please add appropriate volume of ethanol as indicated.

- All reagents should be kept sealed tightly in cool and dry place at room temperature.
- Shelf life：2 years

Principles of Nucleic Acid Co-prep Kit

- The nucleic acid is tightly bound on silica membrane under certain salt condition, and extensive washing removes all contaminations.
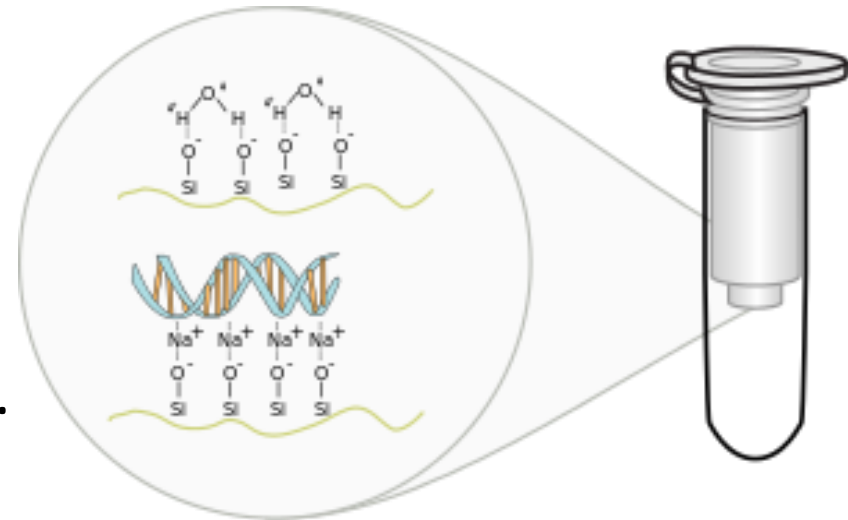
POCKIT micro plus

POCKIT micro plus

Specification	
Fluorescent Wavelength	520 nm (FAM)
Detection Target	DNA / RNA
Throughput	1 - 4 samples per run
PCR Reaction Time	Approx. 45 minutes
Dimensions & Weight	152 (W) × 63 (D) × 50 (H) mm
Weight	380 g
Operating Temperature	15 - 35°C
Power Source	Li-ion polymer battery
Warranty Information	1-year limited warranty

Insulated Isothermal PCR (iiPCR)

iiPCR

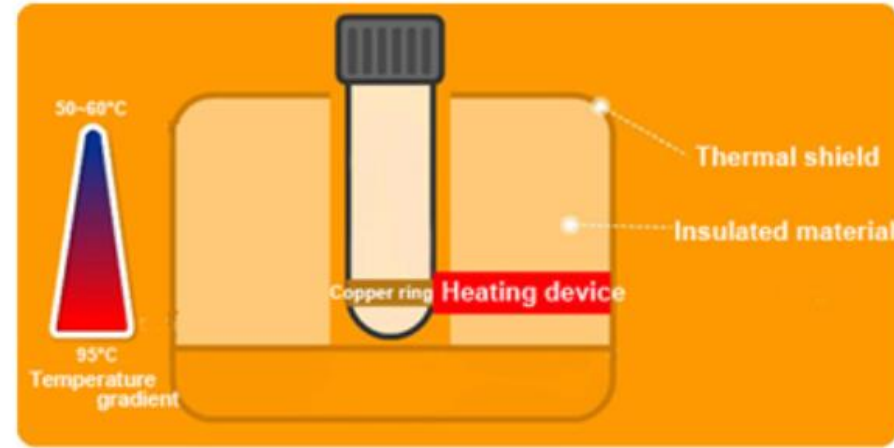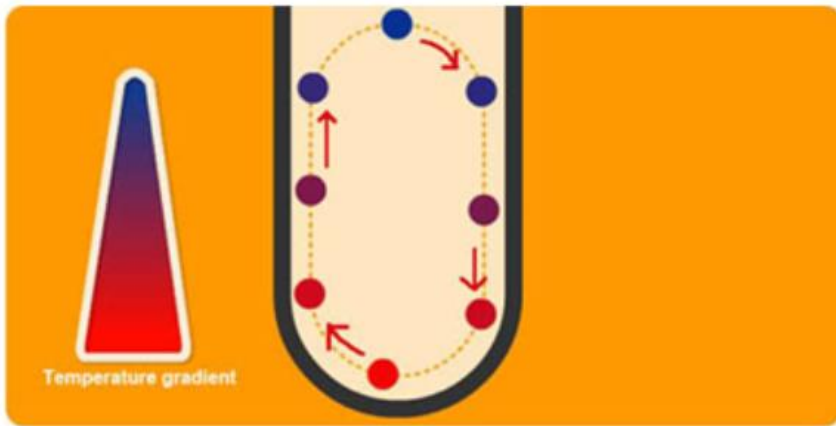**Traditional PCR**
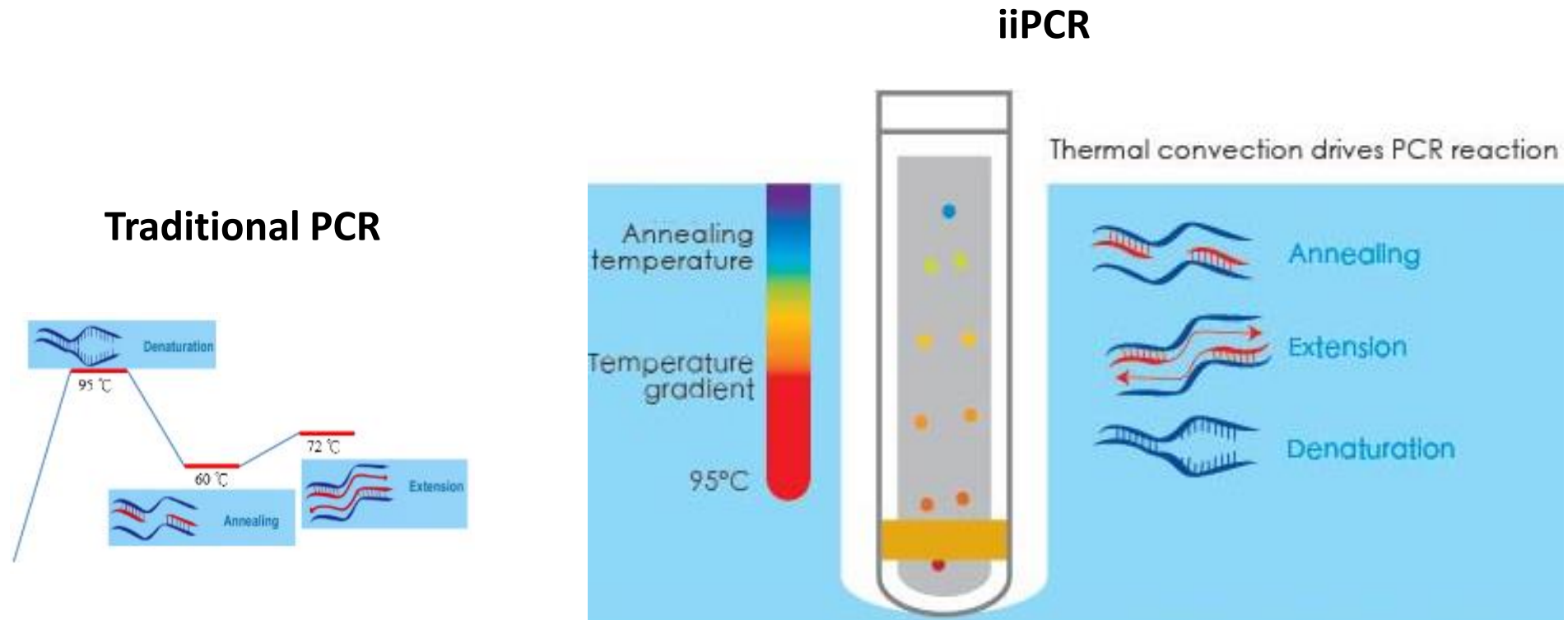
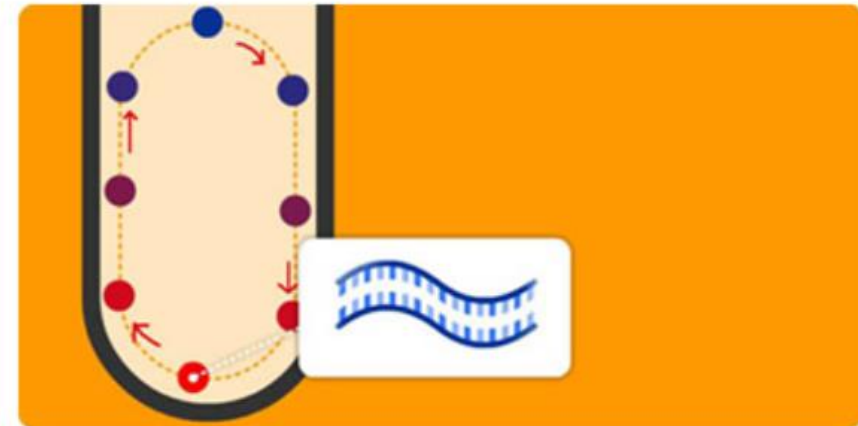**1** The environment is insulated by a radiation shell.
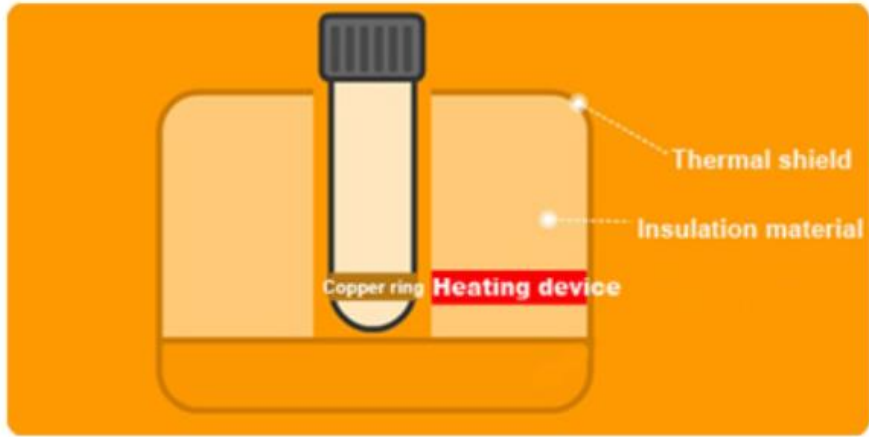
2 Natural thermal convection is induced by heat.

3 Thermal convection drives fluid cycling and results in PCR reaction.

4 Denaturation of dsDNA

5 Primer annealing
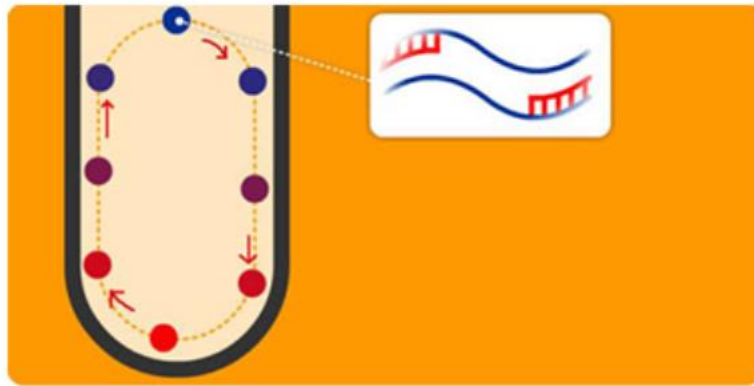
6 Extension of the new strand
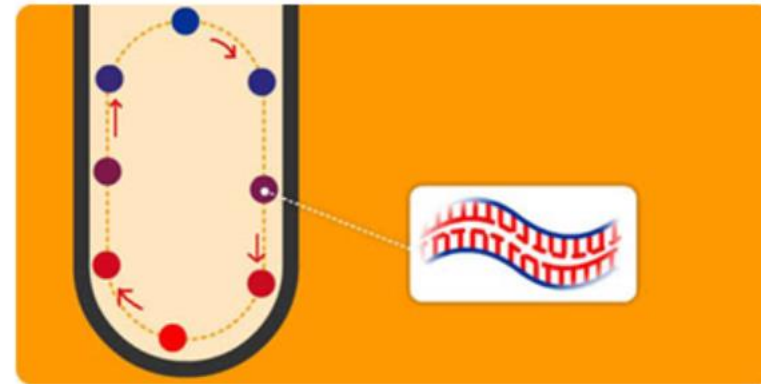
7 DNA is duplicated with the completion of one cycle of thermal convection.
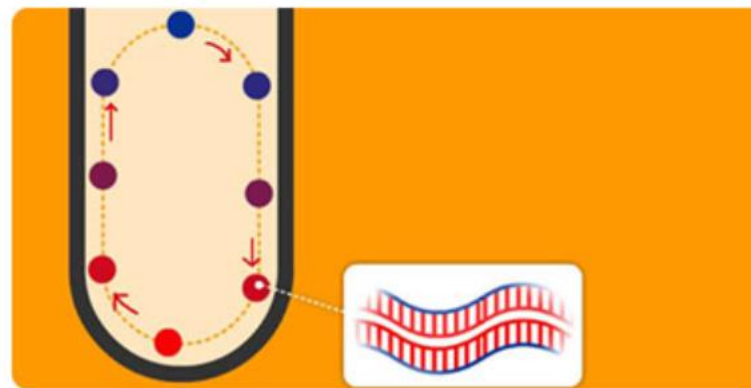
Traditional PCR v.s. Insulated Isothermal PCR (iiPCR)

Traditional PCR	iiPCR
Time-consuming (usually > 1 h)	Time-saving (< 1 h)
Instrument is heavy	Light (Portable)
Complicated set-up	Single default program
Well trained personnel	No specific training is required

Automatic Data Interpretation Process

Fluorescent PCR TaqMan reagent

Optical Fiber

FAM (520 nm)

JOE (550 nm)

Band-pass filter

LED excitation

Optic collection apparatus

Digital Signal Processing Chip
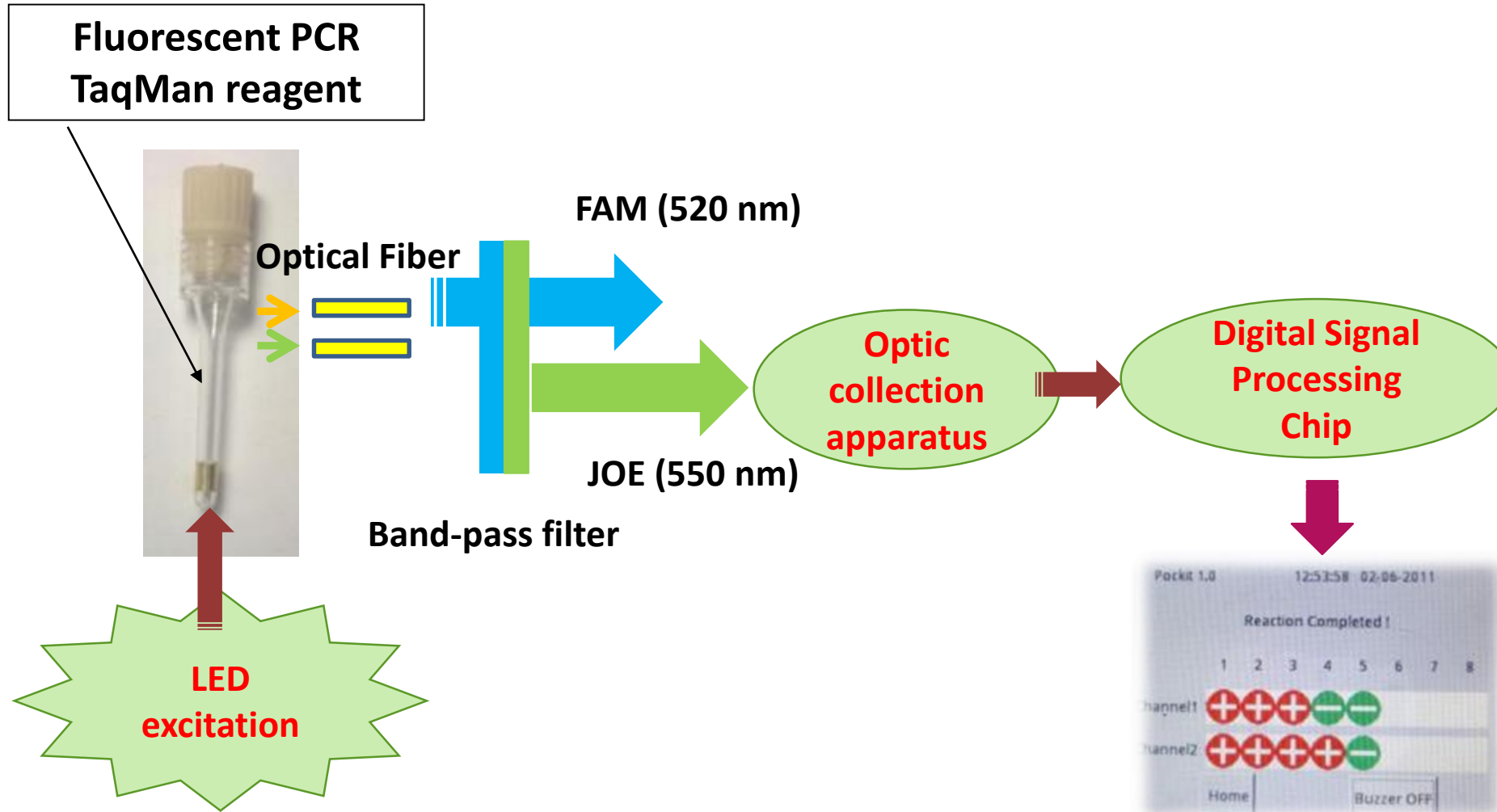
Signal Detection

TaqMan Probe
- Reporter (R)
- Quencher (Q)

Target sequence –
Fluorescence

No Target sequence –
No fluorescence

Reagent Format

- **Lyophilized format**
- **Stored in 2-8°C (shelf life: 2 years after manufacturing)**
- **Can be transported in ambient temperature**
- **Open-bag stability: 2-8°C for 2 months or -20°C for 6 months**

IQ plus TiLV kit

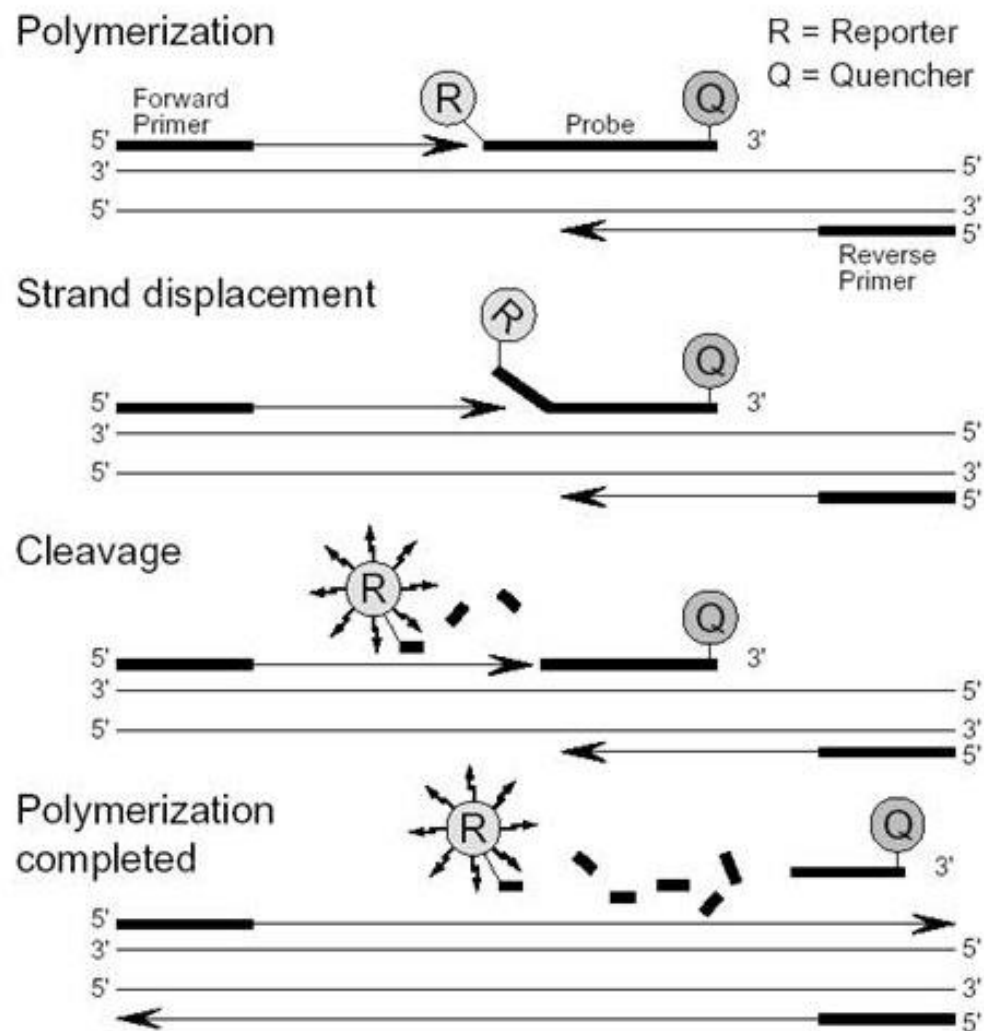| Component	Contents or Purpose	Amount
Premix Pack	Each Premix vial contains lyophilized pellet, which consists mainly of dNTPs, specific primers, fluorescent probes, and enzymes.	6 individually sealed zip-lock packs, 8 vials/pack
Premix Buffer	Reaction buffer to re-dissolve the lyophilized pellet.	2 vials, 1.3 ml/vial
P(+) Standard	Dry plasmid pellet.	1 vial
Standard Buffer	Reaction buffer to re-dissolve the P(+) Standard.	1 vial, 110 µl/vial
Inoculating Loops		3 packs(20pc/pack)

(48 tests/kit; R-tube ,48 tubes/pack)

- The kit should be stored at 4°C (shelf life：3 years)
- 2 week short-term transportation will not affect the efficiency.
- Once the Premix Pack is opened, it would remain stable at 4°C for 2 months or at -20°C for 6 months.

IQ Plus TiLV Reagent Set

- Pathogen: TiLV (ss(-) RNA virus)

- Detected target: Segment 3

- Size of amplicon: 92bp

- Analytical sensitivity (95% hit rate by probit analysis)

  - LoD for POCKIT: up to 10 copies/rxn

- Specificity (Bioinformatic analysis)

  - Inclusivity: TiLV

  - Exclusivity: TLEV, VNN (in silico analysis)

- Interference test (with 300 ng/reaction genomic DNA): PASS

- Suggested sample type

  - brain tissue or liver tissue

Product Specification

- Product name: IQ Plus TiLV Reagent Set (48rxn/kit)

- Product format: iiPCR (single channel, 520 nm)

- Machine/POCKIT version : POCKIT Nucleic Acid Analyzer, POCKIT Micro Plus

- Intended user: fish farm & D-lab

- Applications: screening purpose, pathogen identification

- Suggested extraction Kit:

  - PetNAD™ Nucleic acid Co-prep Kit

  - taco™ mini Automatic Nucleic Acid Extraction System

- Suggested sample type: brain tissue or liver tissue

Advantages of iiPCR Detection Reagent

- **Easy-to-use**: Reagents in lyophilized format

- **Uni-dose:** easy to operate

- **High sensitivity** and **specificity**

- **Dual platform application:** can be adapted for most

  Real-Time PCR instruments

- **Affordable**

Potential Applications of POCKIT system

Aquaculture

Companion Animals

Livestock & Poultry

IVD

Food Safety

Bio-security; Surveillance program

Product list

	Aquaculture		Companion animal		Livestock					Food		Biothreat	Human Diseases
	Shrimp	Fish	Canine	Feline	Equine	Bovine	Poultry	Swine	Ruminant	Microorganism	GMO & food adulteration	Biothreat	Human Diseases
Available Reagents	AHPND/EMS Plasmid	Carp Edema Virus (CEV)	*Anaplasma platys*	*Bordetella bronchiseptica*	*Anaplasma phagocytophilum*	Bovine Leukemia Virus	Avian Reovirus (Asia & America regions only)	*Actinobacillus Pleuropneumonia*	Bluetongue Virus	*Cronobacter* spp.	GMO-CaMV 35S	*Bacillus anthracis* PL3	Chagas Disease
	AHPND/EMS Toxin 1	IRIDO-Megalocytivirus	*Babesia gibsoni*	*Candidatus Mycoplasma haemominutum*	EAV	Bovine Tuberculosis	Chicken infectious anemia virus	Africa Swine Fever Virus	*Brucella abortus*	*Escherichia coli* (O157)	GMO-NOS	*Bacillus anthracis* pXO1	Chikungunya virus
	Baculovirus penaei	IRIDO-Ranaviruses	*Bordetella bronchiseptica*	*Candidatus Mycoplasma turicensis*	EHV-1	*Brucella abortus*	Infectious bronchitis virus	*Brachyspira hyodysenteriae*	*Brucella melitensis*	*Listeria monocytogenes*	GMO-RRS	*Bacillus anthracis* pXO2	Dengue Virus (universal)
	CMNV	ISAV	Canine Adeno Virus 2	*Chlamydophila felis*	EHV-3	*Brucella* spp.	Infectious Bursal Disease Virus	CSFV	*Brucella* spp.	Meat Ingredient	Meat Ingredient	*Brucella abortus*	Filariasis (*Brugia* spp.)
	EHP	KHV	Canine Babesia	*Cytauxzoon felis*	EHV-4	BVDV-1	Infectious Laryngotracheitis	*Mycoplasma suis*	FMDV	Porcine Ingredient	Porcine Ingredient	*Brucella melitensis*	Filariasis (*Wuchereria bancrofti*)
	IHHNV	*Streptococcus iniae*	Canine Influenza Virus	FCoV	EIAV	BVDV-2	Influenza A	FMDV	PPRV	*Salmonella* spp.		*Brucella* spp.	MERS-CoV
	IMNV	SVCV	Canine Leishmaniasis	FCV	Influenza H3N8	*Campylobacter fetus*	Influenza H5 (Asian Lineage)	*Lawsonia intracellularis*		*Staphylococcus aureus*		Chagas disease	*Mycoplasma pneumoniae*
	MrNV	Tilapia Lake Virus (TiLV)	CDV	Feline Parvovirus	*Leptospirosis lipL32*	Rotavirus	Influenza H5 (American Lineage)	*Mycoplasma hyopneumoniae*		*Streptococcus agalactiae*		FV3 Rana Virus	Yellow Fever Virus
	NHPB	VHSV	CHV	FeLV	Rotavirus	*Tritrichomonas foetus*	Influenza H7	*Mycoplasma suis*				MERS-CoV	Zaire Ebolavirus
	PvNV	VNN	CPiV	FHV	*Salmonella* spp.		Influenza HP-H7 with insertion	PCV2				Mink enteritis virus	Zika Virus
	SHIV		CRCoV	FIV	*Streptococcus equi*		Influenza N9	PDCoV				*Paenibacillus larvae*	Leishmaniass
	TSV		*E. granulosus / E.multilocularis*	*Leptospirosis lipL32*	*Taylorella equigenitalis* (CEM)		Marek's Disease	PEDV				*R. communis* (Ricin)	Leptospirosis
	Vibrio harveyi		*Ehrlichia canis*	*Mycoplasma felis*			*Mycoplasma gallisepticum*	Porcine parvovirus				Rift Valley Fever Virus	
	WSSV		Influenza H3N8	*Mycoplasma haemofelis*			*Mycoplasma synoviae*	PRRS-NA				*Salmonella* spp.	
	YHV		*Leptospirosis lipL32*	*Toxoplasma gondii*			NDV-class 1	PRRSV NADC30-like					
			Parvovirus				NDV-class 2	PRRSV-CN					
							NDV-Lasota	PRRSV-EU					
							Salmonella spp.	Pseudorabies Virus -*gB* gene					
							Avian Influenza H9	Pseudorabies Virus -*gE* gene					
								SVA					
								Swine Influenza Virus (Type A)					
Under development	MBV	Largemouth bass virus					Avian Eimeria Species	JEV					C. difficile
							H7 (HPAI)	*Chlamydia psittaci*					Norovirus
							H7 (LPAI)						

PCR applications in food production animals

Comparison between aquaculture and others
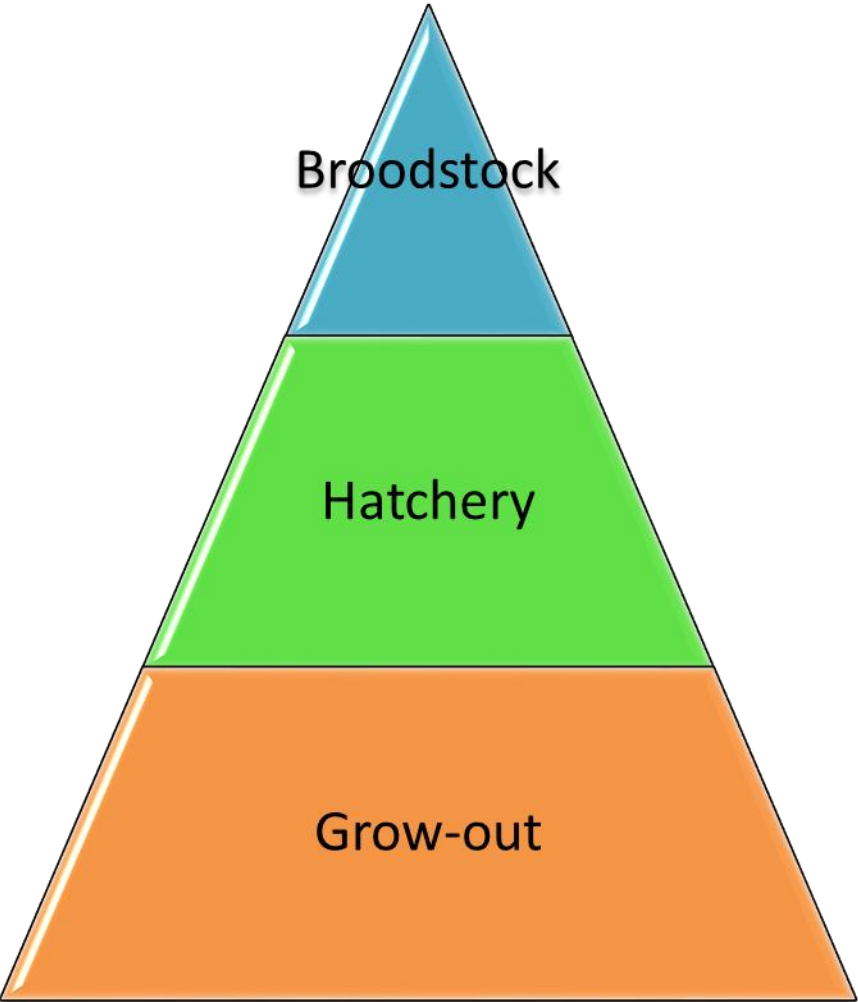
Shrimp farming
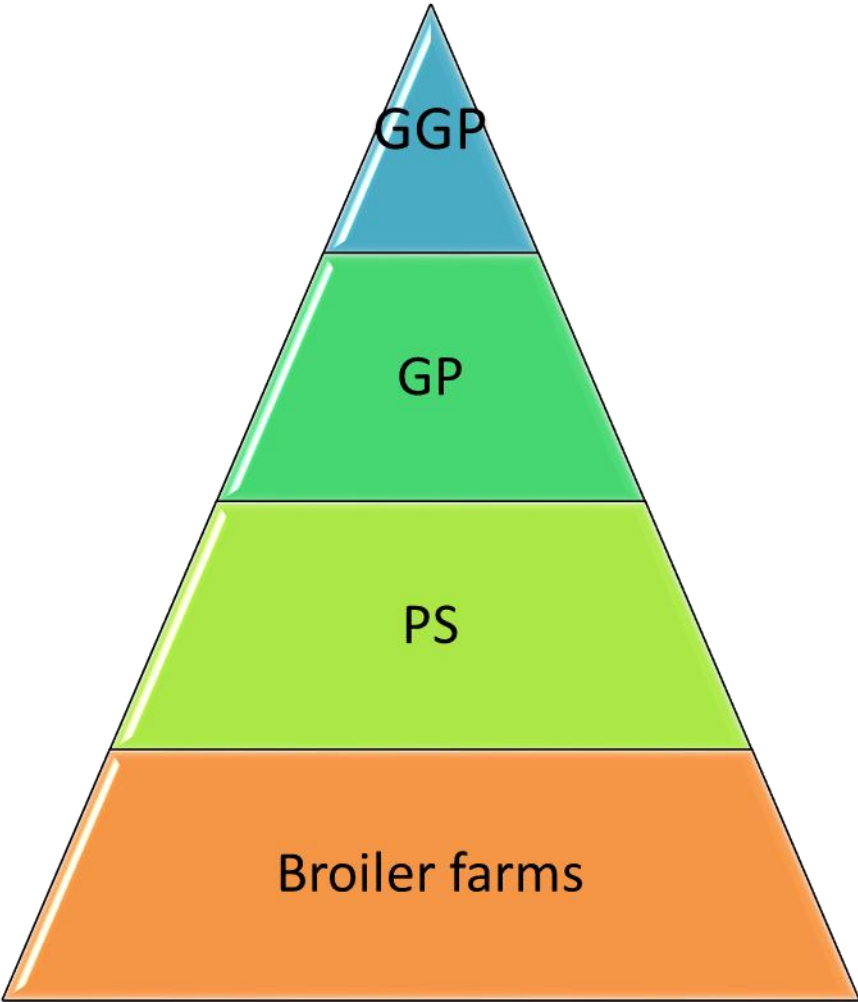
Broiler

Different POCKIT System for different application
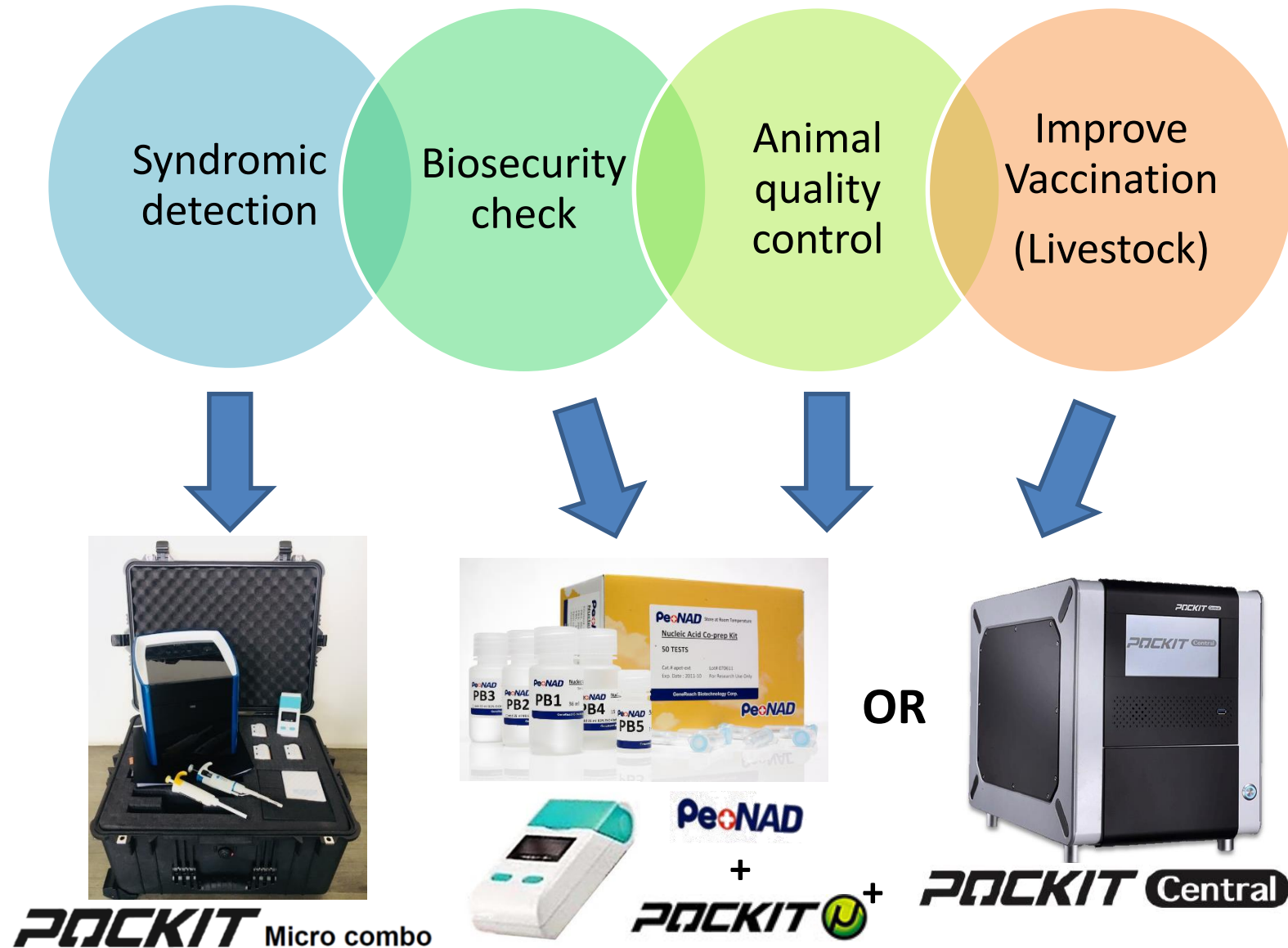
Syndromic detection

Biosecurity check

Animal quality control

Improve Vaccination (Livestock)

OR

Overview of TiLV detection by POCKIT system

PetNAD nucleic acid
co-prep kit

IQ plus TiLV kit on
POCKIT micro plus

**Nucleic Acid
Extraction**

**PCR
detection**

15-20 mins

42 mins

Overview of TiLV detection by POCKIT system

POCKIT Central

Sample in, result out fully automatic nucleic acid detection.

Nucleic Acid Extraction + **PCR detection**

85 mins

Reaction Overview

Operator: SCOTT Report No: 201808170853

	Sample ID	Extraction Lot No.	Reagent Lot No.	Target	520	550
A	TEST 1	0206185	TFC0301185	TF	+	+
B	TEST 2	0206185	TFC0301185	TF	-	+
C	TEST 3	0206185	TFC0301185	TF	?	+
D	TEST 4	0206185	CDVA0307183	CDV	!	
E	TEST 5	0206185	CDVA0307183	CDV	-	
F	TEST 6	0206185	CDVA0307183	CDV	-	
G	TEST 7	0206185	CDVA0307183	CDV	-	
H	TEST 8	0206185	CDVA0307183	CDV	+	

UV Treatment Is Completed   Save to USB   End

POCKIT Central – Sample in, result out fully automatic nucleic acid detection

Fully Automated Nucleic Acid Extraction & PCR System

Test report
• Positive/Negative

Reaction Overview Operator: SCOTT   Report No: 201808170853

	Sample ID	Extraction Lot No.	Reagent Lot No.	Target	520	550
A	TEST 1	0206185	TFC0301185	TF	+	+
B	TEST 2	0206185	TFC0301185	TF	-	+
C	TEST 3	0206185	TFC0301185	TF	?	+
D	TEST 4	0206185	CDVA0307183	CDV	!	
E	TEST 5	0206185	CDVA0307183	CDV	-	
F	TEST 6	0206185	CDVA0307183	CDV	-	
G	TEST 7	0206185	CDVA0307183	CDV	-	
H	TEST 8	0206185	CDVA0307183	CDV	+	

UV Treatment Is Completed   Save to USB   End

SPECIFICATIONS

Throughput	1 - 8 samples
Reaction Time	within 1.5 hours
Fluorescent Wavelength	520 nm & 550 nm
Dimensions (W x H x D)	310 x 400 x 480 mm
Weight	Approx. 21 kg

Testing procedure of POCKIT Central

1. Prepare the PCR reagent into Cartridge Set
2. Open cover of pre-loaded extraction cartridge
3. Add 200ul of sample to the first row
4. Setup the information in POCKIT Central
5. Run
6. Wait for 85 minutes
7. Read results (positive / negative)

Overview of TiLV detection by POCKIT system

taco mini

IQ plus TiLV kit on
POCKIT micro plus

Nucleic Acid Extraction	PCR detection

25 mins

42 mins
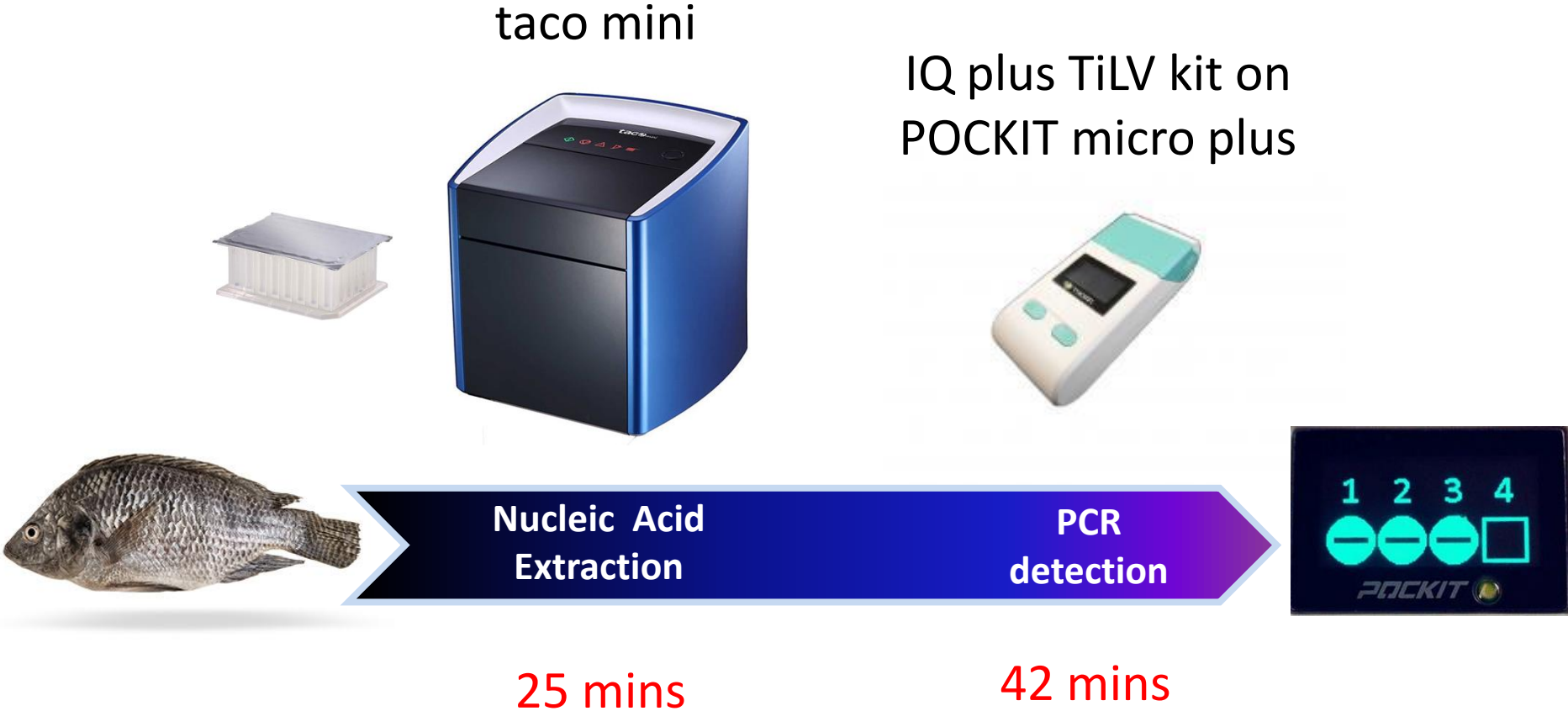
Specification	
Dimensions (W × D × H)	260 mm × 265 mm × 300 mm
Net Weight	5.5 kg
Power Requirement	1. 100-120V/ 200-240V AC, 50/60 Hz, 2A 2. Battery
Fuse	F2A/250V
Operating Temperature	16–30°C
Extraction Time	Within 30 minutes
Throughput	8 Samples

Principles and Advantages

- The **taco^{TM}** is based on the magnetic separation technology by motors and precision screw
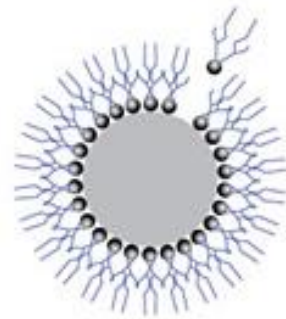
magnetic beads are surface-modified.
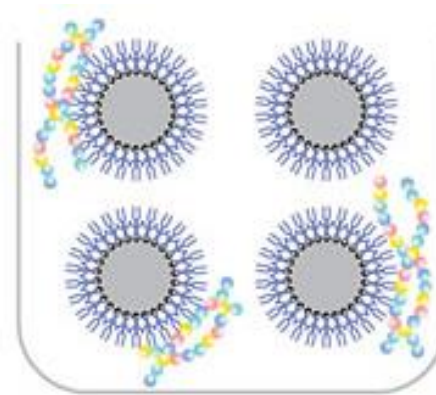
The magnetic beads are capable to bind nucleic acids.
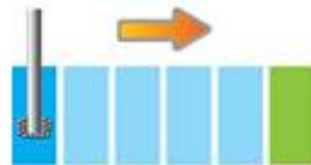
Break the cell in lysis buffer (deep blue). The nucleic acid from broken cell will be bound to the surface-modified magnetic beads.

Wash the beads for three times in wash buffer (light blue).

Release DNA from magnetic beads in the elute (green) and remove the beads with a magnetic bar.

Reagent and Sample Loading

Loading reagent Step	Reagents
1	Add **Lysis Buffer with EtOH** to **column #l**
2	Add **750 µl Washing Buffer A*** to **column #2**
3	Add **750 µl Washing Buffer A** to **column #3**
4	Add **750 µl Washing Buffer B*** to **column #4**
5	Add **750 µl Washing Buffer B** to **column #5**
6	Add **200 µl Eluting Buffer** to **column #6**
7	Add **50 µl Magnetic Bead** to **column #2**
8	Add **Sample** in **column #1**

POCKIT Micro Combo System

taco™ mini (Automatic Nucleic Acid Extraction System)

POCKIT™ Micro Plus Nucleic Acid Analyzer

Pipettes

Lyophilized PCR Reagents/ Extraction Kit/ Accessories
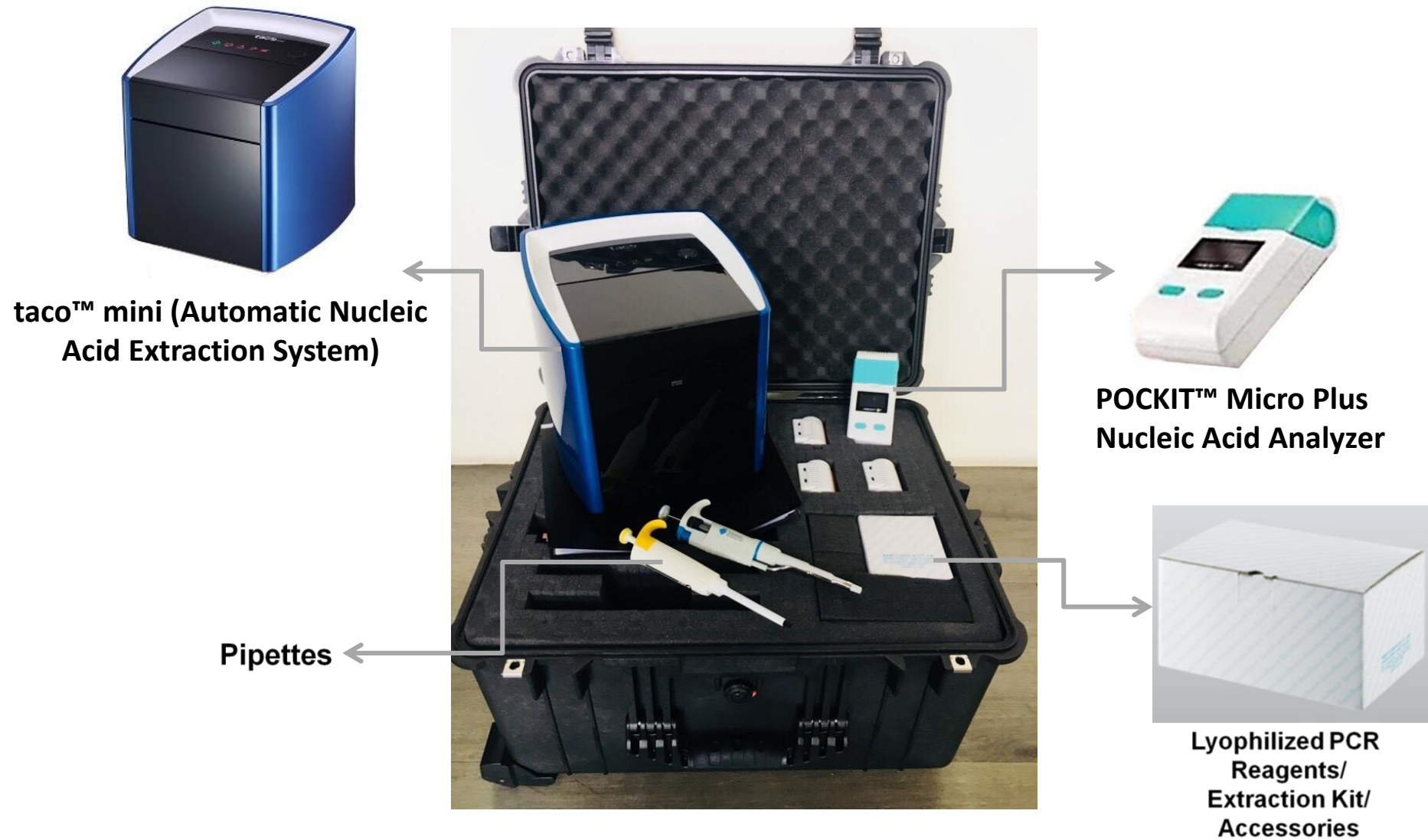
Can farmers use PCR in the farm?

Small PCR lab in the farm
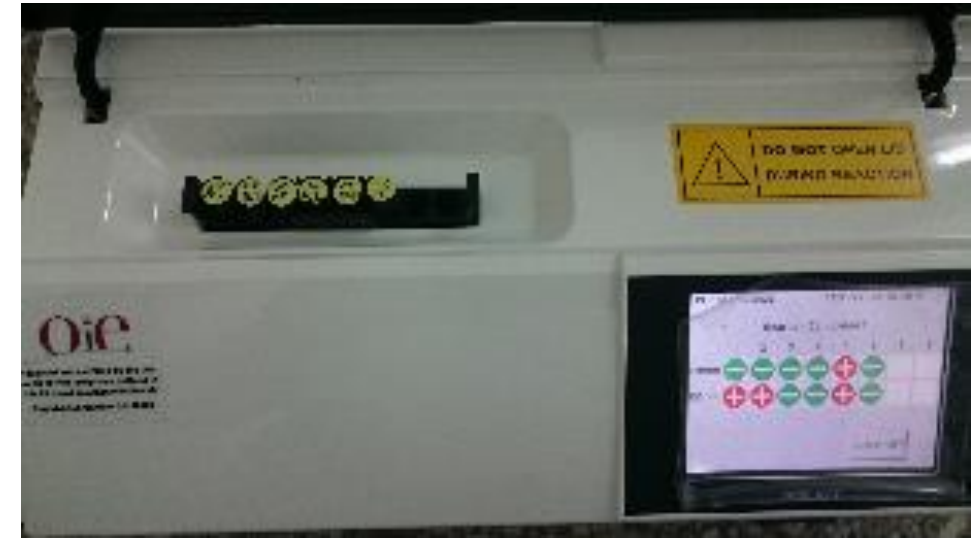
Check PLs

Publication

PLOS ONE — A Peer-Reviewed, Open Access Journal

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PLoS One. 2014; 9(3): e90645.
Published online 2014 Mar 13. doi: 10.1371/journal.pone.0090545
PMCID: PMC3953118

Validation of a Commercial Insulated Isothermal PCR-based POCKIT Test for Rapid and Easy Detection of White Spot Syndrome Virus Infection in *Litopenaeus vannamei*

Yun-Long Tsai,[1] Han-Ching Wang,[2] Chu-Fang Lo,[3] Kathy Tang-Nelson,[4] Donald Lightner,[4] Bor-Rung Ou,[5] Ai-Ling Hour,[6] Chuan-Fu Tsai,[1] Cheng-Chi Yen,[1] Hsiao-Fen Grace Chang,[1] Ping-Hua Teng,[1] and Pei-Yu Lee[1,*]

WSSV iiPCR assay on POCKIT system
Performance comparable to nested PCR (OIE approved)

	WSSV	Nested PCR		
		Positive	Negative	Total
iiPCR	Positive	374	9	383
	Negative	26	291	317
	Total	400	300	700

- Sensitivity- 93.5%, Specificity- 97.0%; Agreement- 95.0% (kappa = 0.90)

PLoS One. 2014; 9(3): e90645.

Validation: Live stocks

Home / Journal of Food Protection®, Number 8, August 2013, pp. 1308-1479

Detection of *Salmonella* in Chicken Meat by Insulated Isothermal PCR

Authors: Tsen, Hau-Yang[1]; Shih, Chia-Ming[1]; Teng, Ping-Hua[2]; Chen, Hsin-Yen[3]; Lin, Chia-Wei[1]; Chiou, Chien-Shun[4]; Wang, Hwa-Tang Thomas[2]; Chang, Hsiao-Fen Grace[2]; Chung, Te-Yu[2]; Lee, Pei-Yu[2]; Chiang, Yu-Cheng[5]

Salmonella spp 2013

Original Article

Insulated Isothermal Reverse Transcriptase PCR (iiRT-PCR) for Rapid and Sensitive Detection of Classical Swine Fever Virus

O. Lung[1,*], J. Pasick[2], M. Fisher[2], C. Buchanan[1], A. Erickson[1] and A. Ambagala[1]

Article first published online: 27 JAN 2015

DOI: 10.1111/tbed.12318

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Issue

Transboundary and Emerging Diseases

Early View (Online Version of Record published before inclusion in an issue)

Chinese Swine Fever Virus 2015

Original Article

A Rapid Field-Deployable Reverse Transcription-Insulated Isothermal Polymerase Chain Reaction Assay for Sensitive and Specific Detection of Bluetongue Virus

A. Ambagala[1,*], S. Pahari[1], M. Fisher[1], P-Y. A. Lee[2], J. Pasick[3], E. N. Ostlund[4], D. J. Johnson[4] and O. Lung[1]

Article first published online: 19 JUL 2015

DOI: 10.1111/tbed.12388

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Issue

Transboundary and Emerging Diseases

Early View (Online Version of Record published before inclusion in an issue)

Porcine epidemic diarrhea virus and Porcine delta coronavirus
2016 Journal of Virological Methods (accepted)

Validation: Pet animals

Wilkes et al. BMC Veterinary Research 2014, 10:213
http://www.biomedcentral.com/1746-6148/10/213

BMC Veterinary Research

METHODOLOGY ARTICLE **Open Access**

Rapid and sensitive detection of canine distemper virus by one-tube reverse transcription-insulated isothermal polymerase chain reaction

Rebecca P Wilkes[1*], Yun-Long Tsai[2], Pei-Yu Lee[2], Fu-Chun Lee[2], Hsiao-Fen Grace Chang[2] and Hwa-Tang Thomas Wang[2]

Canine distemper virus 2014

Journal of Virological Methods
Volume 220, August 2015, Pages 35–38

ELSEVIER

Short communication

An insulated isothermal PCR method on a field-deployable device for rapid and sensitive detection of canine parvovirus type 2 at points of need

Rebecca P. Wilkes[a], Pei-Yu A. Lee[b], Yun-Long Tsai[b], Chuan-Fu Tsai[b], Hsiu-Hui Chang[b], Hsiao-Fen G. Chang[b], Hwa-Tang T. Wang[b]

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Equine H3N8 influenza virus 2015

Journal of Virological Methods
Volume 220, August 2015, Pages 35–38

ELSEVIER

Short communication

An insulated isothermal PCR method on a field-deployable device for rapid and sensitive detection of canine parvovirus type 2 at points of need

Rebecca P. Wilkes[a], Pei-Yu A. Lee[b], Yun-Long Tsai[b], Chuan-Fu Tsai[b], Hsiu-Hui Chang[b], Hsiao-Fen G. Chang[b], Hwa-Tang T. Wang[b]

Canine parvovirus 2015

Brief Communication

Journal of Veterinary Diagnostic Investigation
1–6
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sagepub.com/journalsPermissions.nav
DOI: 10.1177/1040638715593597
jvdi.sagepub.com

Rapid and sensitive detection of *Feline immunodeficiency virus* using an insulated isothermal PCR-based assay with a point-of-need PCR detection platform

Rebecca Penrose Wilkes,[1] Stephen A. Kania, Yun-Long Tsai, Pei-Yu Alison Lee, Hsiu-Hui Chang, Li-Juan Ma, Hsiao-Fen Grace Chang, Hwa-Tang Thomas Wang

Feline immunodeficiency virus 2015

We are providing a Total Solution for Nucleic Acid Detection

DNA/RNA

Amplification & Detection

DNA/RNA
Extraction

Sample
Preparation

Sampling &
homogenization

POCKIT Combo
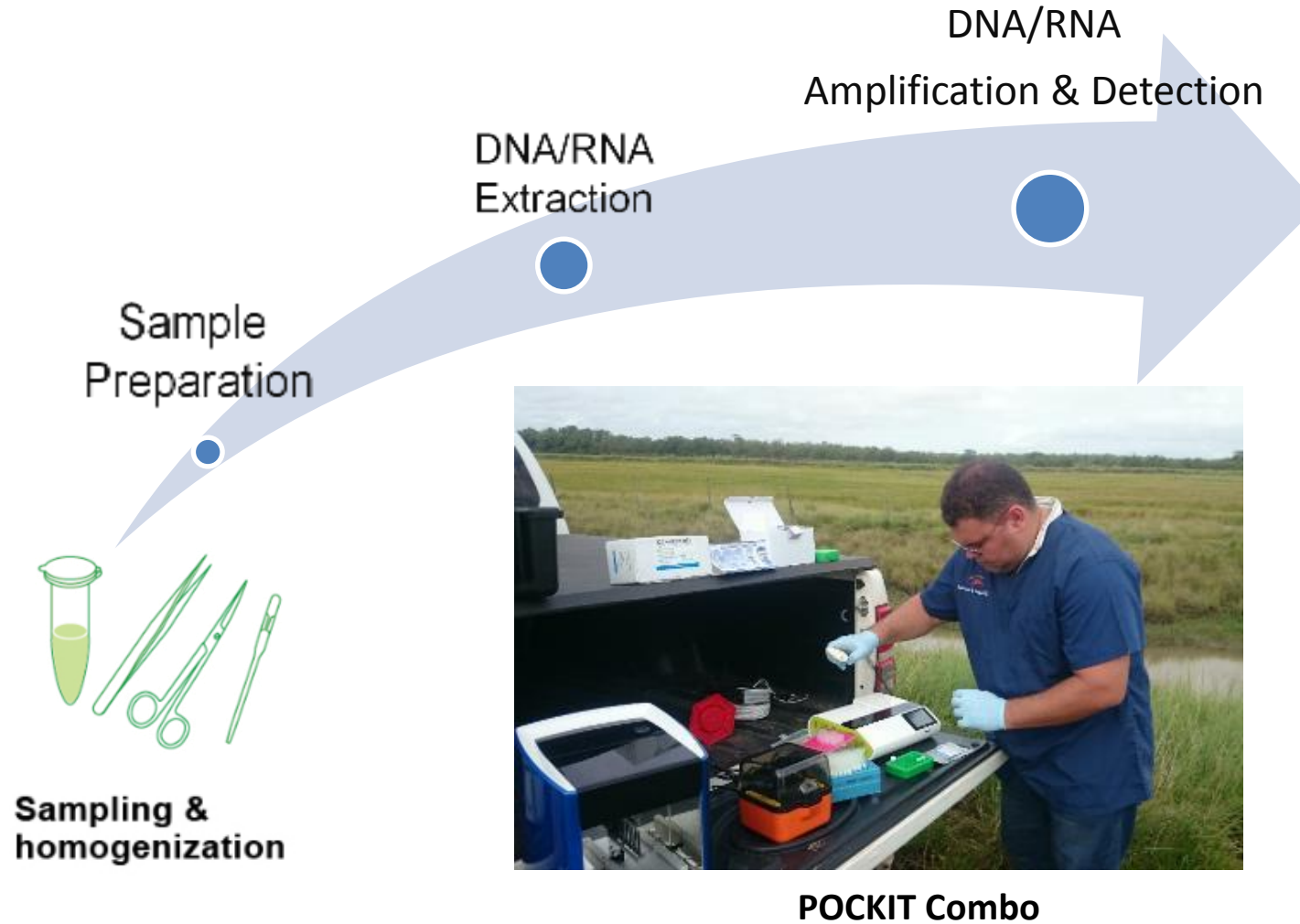
Reagents available

Shrimp	Fish
IQ Plus WSSV Kit with POCKIT System	IQ Plus Irido-Ranaviruses Kit
IQ Plus TSV Kit	IQ Plus VNN Kit
IQ Plus YHV Kit	IQ Plus KHV Kit
IQ Plus IMNV Kit	IQ Plus Irido-Megalocytivirus Kit
IQ Plus PvNV Kit	IQ Plus SVCV Reagent Set
IQ Plus IHHNV Kit	IQ Plus VHSV Reagent Set
IQ Plus NHPB Kit	IQ Plus CEV (Carp edema virus) Reagent Set
IQ Plus V. harveyi Kit	IQ Plus Streptococcus iniae Reagent Set
IQ Plus AHPND/EMS Toxin 1 Kit	IQ Plus TiLV Reagent Set
IQ Plus AHPND/EMS Plasmid Kit	IQ Plus IHNV Reagent Set
IQ Plus EHP Reagent Set	IQ Plus ISAV Reagent Set
IQ Plus CMNV Reagent Set	
IQ Plus Baculovirus penaei Reagent Set	
IQ Plus *Vibrio fluvialis* Reagent Set	
IQ Plus MrNV Reagent Set	
IQ Plus SHIV Reagent Set	

Hands-on-time

1 Prepare 200 µl Sample

2 Add 600 µl PB1
Vortex For 1 min

3 Add 600 µl PB2
Vortex For 10 sec

4 Transfer 600 µl supernatant to the spin column
Spin 1 min

5 Discard the flow-through, add 600 µl PB3 to the column
Spin 1 min

6 Discard the flow-through, add 600µl PB4 to the column
Spin 1 min

7 Discard the flow- through and spin 3 min

8 Discard the flow-through and transfer the column to a new tube

9 Add 200 µl PB5 and stay 1 min at RT.

10 Continue to reaction procedure
Spin 1 min and get **nucleic acid extract**

Operation steps:

11

Add 50 µl Premix Buffer into the premix

12

Dip the inoculating loop to transfer NA extract. Then dip the inoculating loop into the Premix tube.

13

Spin 10 sec

Transfer 50 µl supernatant to the R-tube

14

Place R-tube(s) into POCKIT™ Micro Plus . Close lid and press " " to start.
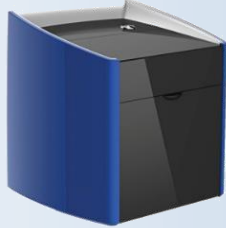
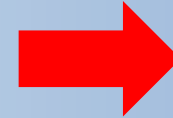# Thank you for your attention

Pipe line of POCKIT

taco™ mini Automatic Nucleic Acid Extraction System

+

POCKIT Portable Nucleic Acid Analyzer

➡

POCKIT combo

taco™ mini Automatic Nucleic Acid Extraction System

+

POCKIT Micro Hand-held Nucleic Acid Analyzer

POCKIT Micro   POCKIT Micro Plus   POCKIT Micro Duo

➡

POCKIT Micro combo

POCKIT Central

Sample in, result out fully automatic nucleic acid detection.

Analytical sensitivity of TiLV RT-iiPCR

Copy/rxn	hit rate	percentage
100	2/2	100%
30	20/20	100%
10	16/20	80%
NTC	0/26	0%

*serial dilutions of IVT RNA

Limit of detection (LoD) 95% is 12 genome equivalents (probit analysis).

Performance of TiLV RT-iiPCR on POCKIT™ Central System

40 mg tissues + 500 ul PBS → grinder → cubee CF 3 min → use supernatant for extraction

b-1. POCKIT Central (use 200µl supernatant)

b-2. NA extraction (200µl supernatant)

Semi-nested RT-PCR

Gel electrophoresis
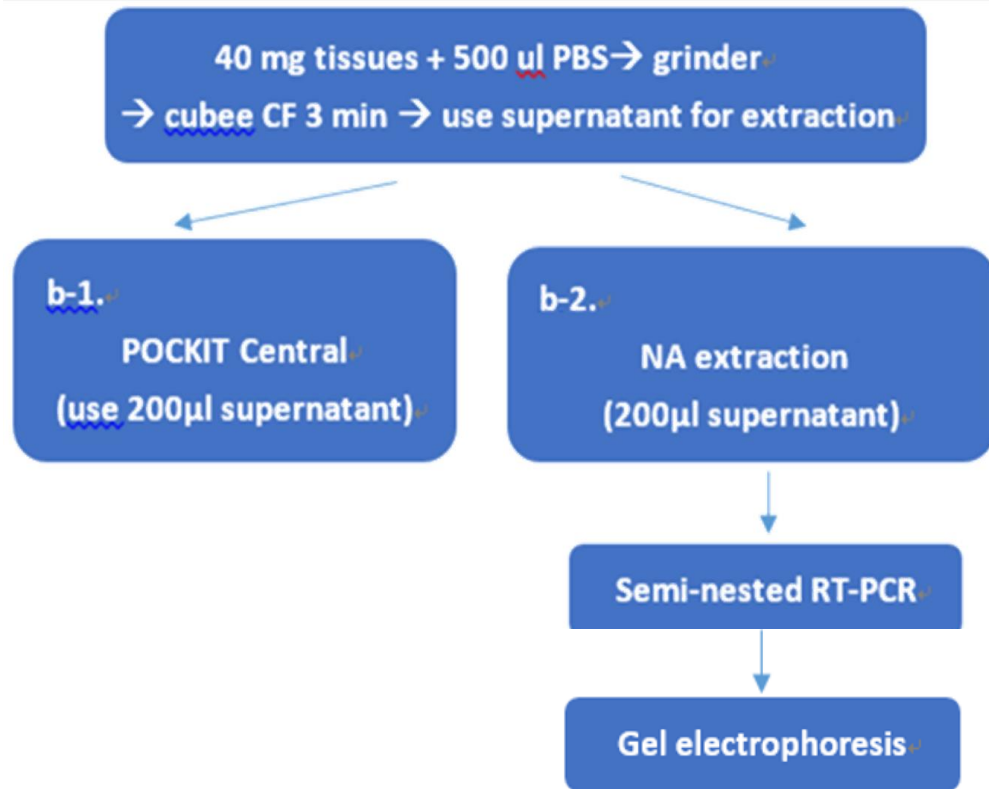
		Semi-nested RT-PCR		
		Positive	Negative	Total
TiLV RT-iiPCR +POCKIT Central	Positive	17	3	20
	Negative	1	71	72
	Total	18	74	92

Agreement 95.65%; CI (95%): 90.73%~100%, k=0.87

Summary:
Higher than 95% agreement between RT-iiPCR and reference semi-nested RT-PCR

Sample number: 92 samples

Sample type: liver, brain, gill, muscle, mix