Sample Preparation Protocol (2015/12)

		Pretreatment	Sample	Beating	tacoPrep			Supernatant	Eluting
Classify	Sample type	Buffer	Size	beads	Cycle	Procedure	taco Kit	Input Volume	Volume
Aquaculture	Fish fin (pectoral fins)	taco DNA/RNA Lysis Buffer:500 μl		2.5 mm Steel Beads x 6	1	<ol> <li>Homogenize tissue by tacoPrep or disposable grinder.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	400 µl	50-200 μl
	Fish gill	taco DNA/RNA Lysis Buffer:500 μl	20 mg	2.5 mm Steel Beads x 6	1	<ol> <li>Homogenize tissue by tacoPrep or disposable grinder.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	400 µl	50-200 μl
	Fish kidney	PBS 500 μl	40 mg	2.5 mm Steel Beads x 6	1	<ol> <li>Homogenize tissue by tacoPrep or disposable grinder</li> <li>Centrifuge by cubee for 1 minute to spin down the debris.</li> <li>Transfer 200 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
	Fish spleen	PBS 500 μl	40 mg	2.5 mm Steel Beads x 6	1	<ol> <li>Homogenize tissue by tacoPrep or disposable grinder.</li> <li>Centrifuge by cubee for 1 minute to spin down the debris.</li> <li>Transfer 200 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
	Joint (hock) fluid	N/A	200 µl	N/A	N/A	Centrifuge with cubee for 5 minutes	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
	Liver	PBS 500 μl	40 mg	2.5 mm Steel Beads x 6	2	<ol> <li>Homogenize tissue by tacoPrep or disposable grinder.</li> <li>Centrifuge by cubee for 1 minute to spin down the debris.</li> <li>Transfer 200 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	200 µl	200 µl
Avian	Nasal cavity Swab	PBS 500 μl	1 swab	N/A	N/A	1. Swirl the swab in 1 ml PBS for 30 seconds. 2. Centrifuge with cubee for 1 minute. 3. Transfer 200 μl of the supernatant for extraction.	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
	Spleen	PBS 500 μl		2.5 mm Steel Beads x 6	2	<ol> <li>Homogenize tissue by tacoPrep or disposable grinder.</li> <li>Centrifuge by cubee for 1 minute to spin down the debris.</li> <li>Transfer 200 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	200 µl	200 µl

\* PBS: Phosphate-Buffered Saline.

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Sample Preparation Protocol (2015/12)

		Pretreatment	Sample	Beating	tacoPrep			Supernatant	Eluting
Classify	Sample type	Buffer	Size	beads	Cycle	Procedure	taco Kit	Input Volume	Volume
		Durier	5120	Deaus	Cycle	1. Swirl the swab in 1 ml PBS for 30 seconds.		input volume	volume
	Larynx swab	PBS:1000 μl	1 swab	N/A	N/A	2. Centrifuge with cubee for 1 minute.	taco DNA/RNA	200 µl	50-200 μl
		ι μι	T SWAD	11/ 7	-	3. Transfer 200 $\mu$ l of the supernatant for extraction.	Extraction Kit	200 μι	<b>30-200</b> μι
Avian						1. Swirl the swab in 1 ml PBS for 30 seconds.			
	Tracheal	PBS:1000 μl	1 swab	N/A	N/A	2. Centrifuge with cubee for 1 minute.	taco DNA/RNA	200 µl	50-200 μl
	swab	ΡΒ3.1000 μι	T SMan	IN/A			<b>Extraction Kit</b>	200 μι	50-200 µi
				0.25 g		<ol> <li>Transfer 200 μl of the supernatant for extraction.</li> <li>1. 12000 x g for 1 minutes discard the supernatant.</li> </ol>			
	Nosema	taco Total		Glass		2. Homogenize sopre with lysis buffer by tacoPrep.			50-200 μl
Dee			NI / A				taco Total DNA	200	
Bee	ceranae	DNA Lysis	N/A	beads		3. Centrifuge at 12000 x g for 5 minutes to spin down the	<b>Extraction Kit</b>	200 µl	
	Spore	Buffer:250 μl		(425-600		debris.			
				μm)		3. Transfer 200 μl of the supernatant for extraction.			
	Milk	N/A	200 µl	N/A	N/A	N/A	taco DNA/RNA	200 μl	50-200 μl
							Extraction Kit	-	
	Vaginal	Vaginal scrape PBS:5000 µl	l 200 μl	N/A	N/A	1. Use the sterile artificial insemination (AI) pipette to	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
						scrape vaginal mucous several times.			
- ·	scrape					2. Take out the AI pipette and put into centrifuge tube			
Bovine						with 5000 μl PBS. Then mix well.			
	Vaginal swab	PBS:1000 μl	1 swab	N/A	N/A	1. Swirl the swab in 1 ml PBS for 30 seconds.	taco DNA/RNA Extraction Kit	200 μl	50-200 μl
						2. Centrifuge with cubee for 1 minute.			
						3. Transfer 200 $\mu$ l of the supernatant for extraction.			
	Whole blood	N/A	200 µl	N/A	N/A	N/A	taco DNA/RNA	200 μl	50-200 μl
			p.:				Extraction Kit		
	Conjunctival			_		1. Swirl the swab in 1 ml PBS for 30 seconds.	taco DNA/RNA		
	swab	PBS:1000 ul   1 swab   N/A   N/A  2. Centrituge with cubee for 1 minute.	•	Extraction Kit	200 µl	50-200 μl			
Canine						3. Transfer 200 µl of the supernatant for extraction.			
	Whole Blood	nole Blood N/A 200 µl N/A N/A N/A	N/A	taco DNA/RNA	NA/RNA 200 μl	50-200 μl			
	Whole blood	19/5	200 μι				Extraction Kit	200 μι	50 200 µi
	Conjunctival	$PBS(1000 \mu) = 1 \text{ swab} = N/A = N/A = 12$ (entrituge with cubee for 1 minute.		taco DNA/RNA					
	swab		1 swab	N/A	-		Extraction Kit	200 μl	50-200 μl
Feline	34400					3. Transfer 200 $\mu$ l of the supernatant for extraction.			
	Whole Blood	Whole Blood N/A 200 μl N/A N/A N/A N/A	200			N/A	taco DNA/RNA	200 µl	50.200
				<b>Extraction Kit</b>	200 μι	50-200 μl			

Sample Preparation Protocol (2015/12)

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Classify	Sample type	Pretreatment	•	Beating	tacoPrep	Procedure	taco Kit	Supernatant	Eluting
		Buffer	Size	beads	Cycle			Input Volume	Volume
	Semen	N/A	N/A	N/A	I N/A I	1. Centrifuge with cubee for 10 minute.	taco DNA/RNA	200 µl !	50-200 μl
	sample					2. Transfer 200 $\mu$ l of the supernatant for extraction.	Extraction Kit		
	Whole blood	N/A	200 µl	N/A	N/A	N/A	taco DNA/RNA	RNA 200 μl	50-200 μl
Equine			200 μ.		,/		Extraction Kit	200 μ.	50 200 µ.
	Upper					1. Swirl the swab in 1 ml PBS for 30 seconds.	taco DNA/RNA		
	respiratory	PBS:1000 μl	1 swab	N/A	N/A	2. Centrifuge with cubee for 1 minute.	Extraction Kit	200 µl	50-200 μl
	tract swab					3. Transfer 200 $\mu$ l of the supernatant for extraction.			
				2.5 mm		1. Homogenize tissue by tacoPrep or disposable grinder.			
		PBS:500 μl	<b>10</b> mg	Steel Beads	2	2. Centrifuge by cubee for 1 minute to spin down the	taco DNA/RNA	100	200 µl
	Lymph node	ΡΒ3:500 μι	40 mg		2	debris.	Extraction Kit	1 <b>00 μ</b> Ι	
				x 6		3. Transfer 100 $\mu$ l of the supernatant for extraction.			
				2.5	2	1. Homogenize tissue by tacoPrep or disposable grinder.	taco DNA/RNA Extraction Kit	200 µl	
			l 40 mg	2.5 mm Steel Beads x 6		2. Centrifuge by cubee for 5 minute to spin down the			200 µl
	Lung	PBS:500 μl				debris.			
						3. Transfer 100 $\mu$ l of the supernatant for extraction.			
			5:1000 μl 1 swab	ib N/A		1. Swirl the swab in 1 ml PBS for 30 seconds.	taco DNA/RNA	200 µl	50-200 μl
	Oral mucosal PBS:1000 µ	PBS:1000 μl				2. Centrifuge with cubee for 10 seconds.			
	swab	_				3. Transfer 200 $\mu$ l of the supernatant for extraction.	Extraction Kit		
Swine		PBS:1000 μl	1 swab	N/A		1. Swirl the swab in 1 ml PBS for 30 seconds.	taco DNA/RNA	200 ul	50-200 μl
	Oral swab					2. Centrifuge with cubee for 10 seconds.			
		_				3. Transfer 200 $\mu$ l of the supernatant for extraction.	Extraction Kit		
	Rectal					1. Swirl the swab in 1 ml PBS for 30 seconds.			50-200 μl
	swab/fecal	PBS:1000 μl	1 swab	N/A	N/A	2. Centrifuge with cubee for 5 minutes.	taco DNA/RNA	200 μl	
	swab	-				3. Transfer 200 $\mu$ l of the supernatant for extraction.	Extraction Kit		
							taco DNA/RNA	200 1	
	Serum	N/A	200 µl	N/A	N/A	N/A	Extraction Kit	200 µl	50-200 μl
				debris.		1. Homogenize tissue by tacoPrep or disposable grinder.			
						2. Centrifuge by cubee for 1 minute to spin down the	taco DNA/RNA		
	Spleen	PBS:500 μl	40 mg		Extraction Kit	100 11	50-200 μl		
				x 6		3. Transfer 100 $\mu$ l of the supernatant for extraction.			
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Sample Preparation Protocol (2015/12)

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Classify	Sample type	Pretreatment Buffer	Sample Size	Beating beads	tacoPrep Cycle	Procedure	taco Kit	Supernatant Input Volume	Eluting Volume
Swine	Swine small intestine	PBS:500 µl		2.5 mm Steel Beads x 6	2	<ol> <li>Homogenize tissue by tacoPrep or disposable grinder.</li> <li>Centrifuge by cubee for 5 minutes to spin down the debris.</li> <li>Transfer 200 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	200 μl	50-200 μl
	whole blood	N/A	200 µl	N/A	N/A	N/A	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
	Milk	N/A	200 μl	N/A	N/A	N/A	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
Sheep/Goat	Vaginal swab	PBS:1000 μl	1 swab	N/A	N/A	1. Swirl the swab in 1 ml PBS for 30 seconds. 2. Centrifuge with cubee for 1 minute. 3. Transfer 200 μl of the supernatant for extraction.	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
	Whole blood	N/A	200 µl	N/A	N/A	N/A	taco DNA/RNA Extraction Kit	200 µl	50-200 μl
Fungus	Fresh Mushroom	taco Plant DNA/RNA Lysis Buffer:500 μl	100 mg	2.5 mm Steel Beads x 6	2	1. Homogenize sample by tacoPrep. 2. Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris. 3. Transfer 400 μl of the supernatant for extraction.	taco Plant DNA/RNA Extraction Kit	400 μl	150 µl
	Yeast	taco DNA/RNA	2 ml(OD 600=1.4)	0.25 g Glass beads (425-600 μm)		<ol> <li>1. 12000 x g for 5 minutes discard the supernatant.</li> <li>2. Homogenize yeast with lysis buffer by tacoPrep.</li> <li>3. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>3. Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco DNA/RNA Extraction Kit	400 μl	50-200 μl
Plant	Carrot (root)	taco Plant DNA/RNA Lysis Buffer:500 μl	20 mg	2.5 mm Steel Beads x 6	2	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 µl	150 µl
	Corn	taco Plant DNA/RNA Lysis Buffer:500 μl	1 seed	2.5 mm Steel Beads x 6	FP	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 μl	150 μl Page 4/5

Sample Preparation Protocol (2015/12)

Classify	Sample type	Pretreatment Buffer	Sample Size	Beating beads	tacoPrep Cycle	Procedure	taco Kit	Supernatant Input Volume	Eluting Volume
	Mung Bean	taco Plant DNA/RNA Lysis Buffer:500 μl	1 seed	2.5 mm Steel Beads x 6	E1	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 µl	150 μl
	Potato (tuber parenchyma tissue)	taco Plant DNA/RNA Lysis Buffer:500 μl	•	2.5 mm Steel Beads x 6	2	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 µl	150 µl
Plant	Rice	taco Plant DNA/RNA Lysis Buffer:500 μl		2.5 mm Steel Beads x 6	1	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 µl	150 µl
Plant	Sweet Potato (ground tissue)	taco Plant DNA/RNA Lysis Buffer:500 μl	20 mg	2.5 mm Steel Beads x 6	2	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 µl	150 µl
	Tobacco leave	taco Plant DNA/RNA Lysis Buffer:500 μl	_	2.5 mm Steel Beads x 6	1	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 µl	150 µl
	Wheat	taco Plant DNA/RNA Lysis Buffer:500 μl	1 seed	2.5 mm Steel Beads x 6	4	<ol> <li>Homogenize tissue by tacoPrep.</li> <li>Vortex for 30 seconds. Centrifuge at 12000 x g for 5 minutes to spin down the debris.</li> <li>Transfer 400 μl of the supernatant for extraction.</li> </ol>	taco Plant DNA/RNA Extraction Kit	400 µl	150 μl

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