

FIELD EQUIPMENT VERIFICATION (PRE/POST A WEEKLY SAMPLING):



Session No:	Verifiers:	Pre date:	Pre time:	Post Date:	Post time:
41	Reed, D. Callnan, L. de la Sota, S. Callnan, L.	6/25/18	9:54	6/29	11:20

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature			n/a	Std	NIST	NIST	NIST	NIST	± 1°C of NIST	Within 1°C	
					26.6	26.7	26.5	—			
°C	1	S-3	n/a		26.5	26	26.4	—			
	1	2	n/a			26.7		—			
Salinity	1		3 months	Std	Tap water	1/29/18	Tap water		± 3%, blank	33.95 – 36.05	
					0.04	33.0 ppt	0.04	33.0			
ppt	1	3	4/23/18		0.03	33.0	0.04	32.9			
	1	2	4/23/18		0.03	32.9	—	—			
Dissolved Oxygen			1 year	Std	100%		100%		Post-check ± 5 % of pre-check	80 – 120 %	
%	1	1	4/2/18		101.6		101.6				
	1	2	8/1/17		100.3		—				
pH			3 weeks	Std					± 3 % of cal solution (6-8)	6.79 – 7.21	
					7.00	10.00	7.00	10.00			
	1	4	6/25/18		6.99	9.99	7.01	10.00	PRETEMP 26.9°C		
	1	3	6/25/18		6.99	9.99	—	—	PRETEMP 27.1°C		
Turbidity			3 months	Std	BLANK	LOW 1-10	BLANK	LOW 1-10	Blank < 0.1 ± 3 % of secondary standard	Low ± 0.18 NTU Med ± 1.8 NTU High ± 18 NTU	
					<0.1	6.14	<0.1				
NTU	23	N/A	5/14/18		0.05	6.18	0.06	6.19			
	1	N/A	6/4/18		0.05						

QA: * Are pre- and post within one week?
* Delay times are ok?
* Other equipment issues?

HAZARD when plugged into wall goes into battery / plug mode intermittently

Team	R2RS	Samplers (Last Name, 1st Initial) MORGAN, T Jarmakemi, B FREIERER, T	Meters and Probes ID		
Session	41		HQ40d: -1	2100Q: -3	
Date	6/26/18		pH: 4	DO: 1	Salinity: J

Location Name Sample ID	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			Waves (0-3)	Wind (0-6)	People			TSS	Nutrient duplicate
				(mg/L)	(%)							water	beach	camp		
Napili Bay RNS180626	8:05	25.8	33.3	6.83	100.9	8.14	2.47	2.53	2.33	0-1	2	5	9	N/A	<input type="checkbox"/>	<input type="checkbox"/>
Pohaku RPO180626	8:31	25.7	32.8	6.60	97.0	8.19	1.89	1.59	1.18	0	2	0	1	0	<input type="checkbox"/>	<input type="checkbox"/>
Kaanapali Sh RKS180626	8:53	25.1	30.6	6.71	96.4	8.15	1.83	4.56	4.48	1	3-4	0-1	2	0	<input type="checkbox"/>	<input type="checkbox"/>
Canoe Beach RCB180626	9:16	25.9	34.0	6.60	98.0	8.19	0.37	0.40	0.37	0	3-4	10	15	NA	<input type="checkbox"/>	<input type="checkbox"/>
Wahikuli RWA180626	9:55	26.0	33.3	6.77	100.4	8.21	1.85	1.91	1.97	0	3	0	6	NA	<input type="checkbox"/>	<input type="checkbox"/>
Canoe RCB	9:39	26.4	33.0	6.94	103.4	8.20	1.24	1.46	1.09	0	3-4	30	2		<input type="checkbox"/>	<input type="checkbox"/>

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high
 Wind: 0: calm; 3: gentle breeze; 6: strong breeze

COASTAL AND ENVIRONMENTAL CONDITIONS		
Most recent tide time (falling or rising)	Low: 8:00 AM High: 3:43 PM	Lahaina Station Lahaina Station
Moon day (from new)	13	
Cloud cover (0-8)	6	
Rain conditions (last 24 hrs)	No	
Wind direction (Trades/Kona)	Trade	
Streams flowing? (Y/N)	No	

NOTES AND COMMENTS (trends, equipment problems, errors, concerns). Use the back of the form if needed.
1x Tripman @ POHAKU w/ 3x RNS - RCB CANOE PRACTICE - RPO - sprinkles RNO 33.3

No more samples at airport beach
 (over)

TURBIDITY VERIFICATION				
	Blank	Low	Med	High
Standard	0.08	6.14	55.7	596
Pre-sampling	0.08	6.17	55.7	596
Post-sampling	0.05	6.21	55.8	596

CHAIN OF CUSTODY INFORMATION			
	# of samples	Relinquished to	Contact
Sediment	0	LHS	
Nutrients	5	LHS	D. Reed
Bacteria	0		

Signature (Team Lead):	Printed Name:
	Dana Reed

Team not notified that RAB is not to be sampled and they collected sample at RAB in RCB bottle. They called ~~do~~ Dana and were advised to bring RCB sample back in the syringe where it could be filtered into a clean acid washed bottle. Syringe was kept on ice with filter for return trip.

WATER QUALITY SAMPLING:

Team:	Samplers:	Last Name, 1 st Initial	Date:
R2RS - 41	Morgan, T		6/26/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
RNS180626-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RPO180626-N-1	Pokahu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:31	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RKS180626-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:53	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RCB180626-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:38	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RWA180626-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:55	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment - TSS							
RNS180626-S-1	Napili Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RPO180626-S-1	Pokahu	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RKS180626-S-1	Kaanapali Sh	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RCB180626-S-1	Canoe Beach	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RWA180626-S-1	Wahikuli	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

 D. Reed

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Polanui	Samplers (Last Name, 1st Initial) <i>Bayley, R</i> <i>Harris, K</i> <i>Brown, M</i>	Meters and Probes ID				
Session	41		HQ40d:	1	2100Q:	3	
Date	6/27/18		pH:	4	DO:	1	Salinity:

Location Name Sample ID	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			Waves (0-3)	Wind (0-6)	People			TSS	Nutrient duplicate
				(mg/L)	(%)							water	beach	camp		
505 Front St PFF180627	8:10	26.0	34.3	6.31	94.4	8.09	2.31	2.86	2.85	Ø	Ø	Ø	12	Ø	□	□
Lindsey Hale PLH180627	8:31	26.1	34.2	6.32	94.6	8.09	1.64	2.12	1.91	Ø	Ø	4	1	Ø	□	□
Lahaina Town PLT180627	8:59	26.4	34.6	6.63	101.1	8.10	2.19	2.27	2.31	Ø	Ø	Ø	Ø	Ø	□	□
Olowalu Pier OSF180627	9:30	26.0	34.6	6.55	98.2	8.11	4.67	4.77	5.66	Ø	Ø	Ø	Ø	Ø	□	□
															□	□
															□	□

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high
 Wind: 0: calm; 3: gentle breeze; 6: strong breeze

COASTAL AND ENVIRONMENTAL CONDITIONS	
Most recent tide time (falling or <u>rising</u>)	Low: 8:31 AM Lahaina Station High: 4:14 PM Lahaina Station
Moon day (from new)	14
Cloud cover (0-8)	Ø
Rain conditions (last 24 hrs)	No
Wind direction (Trades/Kona)	Trades
Streams flowing? (Y/N)	Y. Front St.

NOTES AND COMMENTS (trends, equipment problems, errors, concerns). Use the back of the form if needed.

TURBIDITY VERIFICATION				
	Blank	Low	Med	High
Standard		6.14 6.15	55.7	596
Pre-sampling	.06	6.20	55.8	595
Post-sampling	.07	6.18	55.9	595

CHAIN OF CUSTODY INFORMATION			
	# of samples	Relinquished to	Contact
Sediment	—	—	—
Nutrients	4	LHS	George Brown
Bacteria	—	—	—

Signature (Team Lead):	Printed Name:
<i>Greg S. H. B.</i>	George G. Brown

NO PUAMANA OR LAUNIUPOKO

WATER QUALITY SAMPLING:

Team:	Notetaker:	Date:
Polanui - 41	HANNAH K	6/27/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
PFF180627-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
PLH180627-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:31	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
PLT180627-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:54	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OSF180627-N-1	Olowalu SF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment							
PFF180627-S-1	505 Front St	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
PLH180627-S-1	Lindsey Hale	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
PLT180627-S-1	Lahaina Town	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OSF180627-S-1	Olowalu SF	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

Signature (Team Lead):
Printed Name:

George G. Burnett GEORGE G. BURNETT

Ulu O Ka Wai Ola - Sample Collection Datasheet

Team	Olowalu	Samplers (Last Name, 1st Initial) Noponea, Richard Ranieri, Lindsay	Meters and Probes ID		
Session	41		HQ40d: 1	2100Q: 3	
Date	6/28/18		pH: 4	DO: 1	Salinity: 3

Location Name Sample ID	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			Waves (0-3)	Wind (0-6)	People			TSS	Nutrient duplicate
				(mg/L)	(%)							water	beach	camp		
Martin Hale OPM180628	0725	25.8	34.3	6.00	89.4	8.09	1.60	1.54	1.43	0	0	0	0	0	□	□
Camp Olowalu OCO180628	0740	26.0	34.3	6.39	95.6	8.07	4.86	5.51	5.42	1	1	0	4	0	□	□
Ukumehame OUB180628	0801	26.5	34.6	6.71	101.4	8.17	14.6	14.0	14.0	2 ^{pm}	2	0	1	0	□	□
Papalaua Beach OPB180628	0818	26.3	34.6	6.93	104.4	8.19	5.71	4.90	5.31	2	1	2	0	0	□	□
Papalaua Pali OPP180628	0838	25.9	34.6	6.91	103.5	8.18	2.99	3.44	3.64	3	2	1	2	2	□	□
															□	□

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high
 Wind: 0: calm; 3: gentle breeze; 6: strong breeze

COASTAL AND ENVIRONMENTAL CONDITIONS	
Most recent tide time (<u>falling</u> or rising)	Low: 9:02 AM Lahaina Station High: 2:55 AM Lahaina Station
Moon day (from new)	15
Cloud cover (0-8)	3
Rain conditions (last 24 hrs)	No Rain
Wind direction (Trades/Kona)	No Wind, KONA
Streams flowing? (Y/N)	No

TURBIDITY VERIFICATION				
	Blank	Low	Med	High
Standard	0.07	6.14	55.7	596
Pre-sampling	0.06	6.17	55.9	595
Post-sampling	0.05	6.14	55.6	595

NOTES AND COMMENTS (trends, equipment problems, errors, concerns). Use the back of the form if needed. TEMP Δ @ OPM 0.2 SALINITY VS. DO (26.0) ALSO 0.2 HIGHER @ OCO AND OUB ALL SITES → 0.2 HIGHER TEMP ON DO PROBE
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CHAIN OF CUSTODY INFORMATION			
	# of samples	Relinquished to	Contact
Sediment	—	—	—
Nutrients	3	LHS	George Burnett
Bacteria	—	—	—

Signature (Team Lead):	Printed Name:
<i>George G. Burnett</i>	George G. Burnett

WATER QUALITY SAMPLING:

Team:	Notetaker:	Date:
Olowalu - 41	NANZENS, L	6/28/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
OPM180628-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0725	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OCO180628-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0740	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OUB180628-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0801	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OPB180628-N-1	Papalaua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0818	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OPP180628-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0838	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment							
OPM180628-S-1	Martin Hale	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OCO180628-S-1	Camp Olowalu	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OUB180628-S-1	Ukumehame	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OPB180628-S-1	Papalaua Beach	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OPP180628-S-1	Papalaua Pali	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

Signature (Team Lead):

Printed Name:

GEORGE G. BARNETT

Team/ Session	Samplers Last Name, 1st Initial						Instrument #	pH #	DO #	Salinity #	Date:
R2RN	Notetaker: <i>Lyn Hutchings</i>						40d: 1	4	1	3	6/29/18
41	Others: <i>Barker, Brock, Stone, Ananda</i>						2100q: 3				

Location Name	Time	Temp (C)	Sal (ppt)	DO (mg/L)	DO Sat (%)	pH	Turbidity (NTU)			Waves	Wind	People (within 100 ft)			TSS ?	Nutrient Duplicate ?
												In Water	Beach	Camp		
Honolua Bay RHL RHL180629	7:40	25.1	33.1	6.11	81.4	8.16	2.30	2.05	2.00	0	1	0	3	0	<input type="checkbox"/>	<input type="checkbox"/>
Oneloa Bay RON RON180629	8:30	25.2	34.4	6.97	103.0	8.19	0.41	0.38 ^{as}	0.40	3	4	0	2	0	<input type="checkbox"/>	<input type="checkbox"/>
Kapalua Bay RFS RFS180629	9:00	25.4	31.9	6.86	100.2 ^{as}	8.11	4.47	3.68	3.32	0	2	24	35	0	<input type="checkbox"/>	<input type="checkbox"/>
Ka'opala Bay RKO RKO180629	9:25	25.5	33.2	6.68	98.4	8.09	9.73	10.6	11.2	1	0	2	1	0	<input type="checkbox"/>	<input type="checkbox"/>
Kahana Vill RKV RKV180629	9:50	25.2	33.7	6.66	97.9	8.10	11.3	12.6	15.0 ^{as} 9.23	0	2	10	5	0	<input type="checkbox"/>	<input type="checkbox"/>
															<input type="checkbox"/>	<input type="checkbox"/>

COASTAL AND ENVIRONMENTAL CONDITION NOTES

Most recent Low & High tide Time (Lahaina station) indicate Falling or Rising	Low 8:33 am High 4:00 pm (rising)
Moon Day (from new)	16
Cloud Cover (0-8):	1
Rain Conditions (last 24 hours)	Yesterday
Wind Direction (Trades? Kona?):	Trades
Streams flowing? (Y/N)	Y-RHL
QA Notes and Comments (Trends? Equip problems? Errors? Concerns? Use back of form if needed.) RHL - Shark warning sign	

Waves: 0 ft = no waves; 1 ft = small waves; 2 ft = knee high; 3 ft = waist high
 Wind: 0 = calm, 1 = light air, 2 = light breeze, 3 = gentle breeze, 4 = moderate breeze
 People: Swimmers/Kayakers/Surfers, On beach, Campers

Turbidity Verification				
	Blank	Low	Med	High
Standard	0.05	6.14	55.7	596
Pre	0.08	6.13	55.3	593
Post	0.06	6.19	55.9	595

	Total # of samples	Relinquished To::	Contact
Sediment		LHS	
Nutrient	5	LHS	Sofia
Bacteria	-	-	-

Signature (Team Lead): *Debra* Print name here: *Sofia de la Sota*

WATER QUALITY SAMPLING:

Team:	Samplers:	Last Name, 1 st Initial	Date:
R2RN - 41	Hutchings, L Banker, B	Stone, A	6/29/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
RHL180629-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:40	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RON180629-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RFS180629-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:07	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RKO180629-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RKV180629-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:50	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment - TSS							
RHL180629-S-1	Honolua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RON180629-S-1	Oneloa Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RFS180629-S-1	Kapalua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RKO180629-S-1	Ka'opala Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RKV180629-S-1	Kahana Village	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

Signature (Team Lead):
Johanna L...
Print name here:
Johanna de la Jota