1	Set Variable		Number of samples "How many samples?" "How many samples?", 1 - 96
2	Wash Tips	1-4	3.0 + 4.0 ml
3	Group		Wash RIPA
4	Set Variable		SAMPLE_CNT = Number of samples
5	Begin Loop		24 times "Wash RIPA_1"
6	Get DiTis	1-4	DiTi aluminium 200 ul
7	Aspirate	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
8	Drop DiTis	1-4	DiTi LiHa Waste
9	End Loop		"Wash RIPA_1"
10	Set Variable		SAMPLE_CNT = -1
11	Set Variable		SAMPLE_CNT = Number of samples
12	Begin Loop		24 times "Wash RIPA_1"
13	Get DiTis	1-4	DiTi aluminium 200 ul
14	Aspirate	1-4	150 µl Water free dispense "RIPA" (Col. 1, Rows 3-6)
15	Dispense	1-4	150 µl Water Detect 500µL "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
16	Drop DiTis	1-4	DiTi LiHa Waste
17	End Loop		"Wash RIPA_1"
18	Set Variable		SAMPLE_CNT = -1
19	Drop DiTis	1-4	DiTi LiHa Waste
20	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
21	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
22	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
23	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)

24	Start Timer		2
25	Wait for Timer		Timer 2 : 60 sec
26	Set Variable		SAMPLE_CNT = Number of samples
27	Begin Loop		24 times "Wash RIPA_2"
28	Get DiTis		DiTi aluminium 200 ul
29	Aspirate	 	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
30	Drop DiTis		DiTi LiHa Waste
31	End Loop		"Wash RIPA_2"
32	Set Variable		SAMPLE_CNT = -1
33	Set Variable		SAMPLE_CNT = Number of samples
34	Begin Loop		24 times "Wash RIPA_3"
35	Get DiTis		DiTi aluminium 200 ul
36	Aspirate	 	150 µl Water free dispense "RIPA" (Col. 1, Rows 3-6)
37	Dispense	 	150 µl Water Detect 500µL "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
38	Drop DiTis		DiTi LiHa Waste
39	End Loop		"Wash RIPA_3"
40	Set Variable		SAMPLE_CNT = -1
41	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
42	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
43	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
44	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
45	Start Timer		3
46	Wait for Timer		Timer 3 : 60 sec
47	Set Variable		SAMPLE_CNT = Number of samples

48	Begin Loop		24 times "Wash RIPA_4"
49	Get DiTis		DiTi aluminium 200 ul
50	Aspirate	 	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
51	Drop DiTis		DiTi LiHa Waste
52	End Loop		"Wash RIPA_4"
53	Set Variable		SAMPLE_CNT = -1
54	Group End		Wash RIPA
55	Group		Wash IPWB2
56	Set Variable		SAMPLE_CNT = Number of samples
57	Begin Loop		24 times "Wash IPWB2_1"
58	Get DiTis		DiTi aluminium 200 ul
59	Aspirate	 	150 µl Water free dispense "IPWB2" (Col. 1, Rows 3-6)
60	Dispense	 	150 µl Water Detect 500µL "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
61	Drop DiTis		DiTi LiHa Waste
62	End Loop		"Wash IPWB2_1"
63	Set Variable		SAMPLE_CNT = -1
64	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
65	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
66	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
67	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
68	Start Timer		4
69	Wait for Timer		Timer 4 : 60 sec
70	Set Variable		SAMPLE_CNT = Number of samples
71	Begin Loop		24 times "Wash IPWB2_2"

72	Get DiTis	1-4	DiTi aluminium 200 ul
73	Aspirate	1-4	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
74	Drop DiTis	1-4	DiTi LiHa Waste
75	End Loop		"Wash IPWB2_2"
76	Set Variable		SAMPLE_CNT = -1
77	Set Variable		SAMPLE_CNT = Number of samples
78	Begin Loop		24 times "Wash IPWB2_3"
79	Get DiTis	1-4	DiTi aluminium 200 ul
80	Aspirate	1-4	150 µl Water free dispense "IPWB2" (Col. 1, Rows 3-6)
81	Dispense	1-4	150 µl Water Detect 500µL "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
82	Drop DiTis	1-4	DiTi LiHa Waste
83	End Loop		"Wash IPWB2_3"
84	Set Variable		SAMPLE_CNT = -1
85	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
86	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
87	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
88	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
89	Start Timer		5
90	Wait for Timer		Timer 5 : 60 sec
91	Set Variable		SAMPLE_CNT = Number of samples
92	Begin Loop		24 times "Wash IPWB2_4"
93	Get DiTis	1-4	DiTi aluminium 200 ul
94	Aspirate	1-4	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
95	Drop DiTis	1-4	DiTi LiHa Waste

96	End Loop		"Wash IPWB2_4"
97	Set Variable		SAMPLE_CNT = -1
98	Group End		Wash IPWB2
99	Group		Wash PBS
100	Set Variable		SAMPLE_CNT = Number of samples
101	Begin Loop		24 times "Wash PBS_1"
102	Get DiTis	1-4	DiTi aluminium 200 ul
103	Aspirate	1-4	150 µl Water free dispense "PBS" (Col. 1, Rows 3-6)
104	Dispense	1-4	150 µl Water Detect 500µL "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
105	Drop DiTis	1-4	DiTi LiHa Waste
106	End Loop		"Wash PBS_1"
107	Set Variable		SAMPLE_CNT = -1
108	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
109	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
110	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
111	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
112	Set Variable		SAMPLE_CNT = Number of samples
113	Begin Loop		24 times "Wash PBS_2"
114	Get DiTis	1-4	DiTi aluminium 200 ul
115	Aspirate	1-4	150 µl Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
116	Drop DiTis	1-4	DiTi LiHa Waste
117	End Loop		"Wash PBS_2"
118	Set Variable		SAMPLE_CNT = -1
119	Set Variable		SAMPLE_CNT = Number of samples

120	Begin Loop		24 times "Wash PBS_3"
121	Get DiTis	1-4	DiTi aluminium 200 ul
122	Aspirate	1-4	150 µl Water free dispense "PBS" (Col. 1, Rows 3-6)
123	Dispense	1-4	150 µl Water Detect 500µL "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
124	Drop DiTis	1-4	DiTi LiHa Waste
125	End Loop		"Wash PBS_3"
126	Set Variable		SAMPLE_CNT = -1
127	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
128	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
129	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
130	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
131	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '2'; Narrow (MCA96 1)
132	Group End		Wash PBS
133	Group		Transfer to new plate and discard PBS
134	Set Variable		SAMPLE_CNT = Number of samples
135	Begin Loop		24 times "New plate"
136	Get DiTis	1-4	DiTi aluminium 200 ul
137	Mix	1-4	1 x 150 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-4) , 1 option
138	Aspirate	1-4	180 µl Water free dispense "Working plate" (Col. 1, Rows 1-4) , 1 option
139	Dispense	1-4	180 µl Helena Water free dispense "New plate" (Col. 1, Rows 1-4) , 1 option
140	Drop DiTis	1-4	DiTi LiHa Waste
141	End Loop		"New plate"
142	Set Variable		SAMPLE_CNT = -1
143	Transfer Labware		Source: Grid '14,' Site '1'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)

144	Start Timer		6
145	Transfer Labware		Source: Grid '14,' Site '2'; Destination: Grid '32', Site '19'; Narrow (MCA96 1)
146	Wait for Timer		Timer 5 : 60 sec
147	User Prompt		"Put new plate on site 1 " sound : once
148	Set Variable		SAMPLE_CNT = Number of samples
149	Begin Loop		24 times "To new plate"
150	Get DiTis	1-4	DiTi aluminium 200 ul
151	Aspirate	1-4	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4)
152	Drop DiTis	1-4	DiTi LiHa Waste
153	End Loop		"To new plate"
154	Set Variable		SAMPLE_CNT = -1
155	Group End		Transfer to new plate and discard PBS
156	Group		End-repair
157	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '2'; Narrow (MCA96 1)
158	Get DiTis	1-4	DiTi aluminium 200 ul
159	Set Variable		SAMPLE_CNT = Number of samples
160	Begin Loop		24 times "End repair"
161	Aspirate	1	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 2)
162	Aspirate	2	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 2)
163	Aspirate	3	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 2)
164	Aspirate	4	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 2)
165	Dispense	1-4	25 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-4) , 1 option
166	End Loop		"End repair"

167	Set Variable		SAMPLE_CNT = -1
168	Drop DiTis		DiTi LiHa Waste
169	Get DiTis		Grid 32; Site: 2 (DiTi 200ul Nested MCA96) Fetch 8 rows and 12 columns
170	Mix		35 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-8)
171	Begin Loop		6 times "4 first wells"
172	Start Timer		1
173	Wait for Timer		Timer 1 : 300 sec
174	Mix		35 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-8)
175	End Loop		"4 first wells"
176	Drop DiTis		Grid 32; Site: 19 (DiTi Nested Waste)
177	Transfer Labware		Source: Grid '14,' Site '2'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
178	Start Timer		2
179	Transfer Labware		Source: Grid '32,' Site '2'; Destination: Grid '32', Site '19'; Narrow (MCA96 1)
180	Wait for Timer		Timer 2 : 30 sec
181	Group End		End-repair
182	Group		Wash after End-repair
183	Set Variable		SAMPLE_CNT = Number of samples
184	Begin Loop		24 times "wash End-repair"
185	Get DiTis		DiTi aluminium 200 ul
186	Aspirate	 	25 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
187	Drop DiTis		DiTi LiHa Waste
188	End Loop		"wash End-repair"
189	Set Variable		SAMPLE_CNT = -1
190	Get DiTis		DiTi aluminium 200 ul

191	Set Variable	SAMPLE_CNT = Number of samples
192	Begin Loop	24 times "wash End-repair"
193	Aspirate	 100 µl Water free dispense "PBS" (Col. 1, Rows 3-6)
194	Dispense	  100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
195	End Loop	"wash End-repair"
196	Set Variable	SAMPLE_CNT = -1
197	Drop DiTis	 DiTi LiHa Waste
198	Move LIHA	  Positioning with global Z-Travel "200 µl DiTi 1" (Col. 1, Rows 1-4)
199	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
200	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
201	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
202	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
203	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
204	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
205	Start Timer	3
206	Wait for Timer	Timer 3 : 30 sec
207	Set Variable	SAMPLE_CNT = Number of samples
208	Begin Loop	24 times "wash End-repair"
209	Get DiTis	 DiTi aluminium 200 ul
210	Aspirate	  105 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4)
211	Drop DiTis	 DiTi LiHa Waste
212	End Loop	"wash End-repair"
213	Set Variable	SAMPLE_CNT = -1
214	Get DiTis	 DiTi aluminium 200 ul

215	Set Variable	SAMPLE_CNT = Number of samples	
216	Begin Loop	24 times "wash End-repair"	
217	Aspirate	1-4	100 µl Water free dispense "PBS" (Col. 1, Rows 3-6)
218	Dispense	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
219	End Loop	"wash End-repair"	
220	Set Variable	SAMPLE_CNT = -1	
221	Drop DiTis	1-4	DiTi LiHa Waste
222	Move LIHA	1-4	Positioning with global Z-Travel "200 µl DiTi 1" (Col. 1, Rows 1-4)
223	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)	
224	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)	
225	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)	
226	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)	
227	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)	
228	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)	
229	Start Timer	4	
230	Wait for Timer	Timer 4 : 30 sec	
231	Set Variable	SAMPLE_CNT = Number of samples	
232	Begin Loop	24 times "wash End-repair"	
233	Get DiTis	1-4	DiTi aluminium 200 ul
234	Aspirate	1-4	105 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4)
235	Drop DiTis	1-4	DiTi LiHa Waste
236	End Loop	"wash End-repair"	
237	Set Variable	SAMPLE_CNT = -1	
238	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '2'; Narrow (MCA96 1)	

239	Group End		Wash after End-repair
240	Group		A-tailing
241	Get DiTis	1-4	DiTi aluminium 200 ul
242	Set Variable		SAMPLE_CNT = Number of samples
243	Begin Loop		4 times "4 first wells"
244	Aspirate	1	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 3)
245	Aspirate	2	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 3)
246	Aspirate	3	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 3)
247	Aspirate	4	25 µl Helena Water free dispense "Labware1" (Col. 1, Row 3)
248	Dispense	1-4	25 µl Water Detect 500µL "Working plate" (Col. 1, Rows 1-4) , 1 option
249	End Loop		"4 first wells"
250	Set Variable		SAMPLE_CNT = -1
251	Drop DiTis	1-4	DiTi LiHa Waste
252	Get DiTis		Grid 32; Site: 3 (DiTi 200ul Nested MCA96) Fetch 8 rows and 12 columns
253	Mix		35 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-8)
254	Begin Loop		6 times "4 first wells"
255	Start Timer		5
256	Wait for Timer		Timer 5 : 300 sec
257	Mix		35 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-8)
258	End Loop		"4 first wells"
259	Drop DiTis		Grid 32; Site: 19 (DiTi Nested Waste)
260	Transfer Labware		Source: Grid '32,' Site '3'; Destination: Grid '32', Site '19'; Narrow (MCA96 1)
261	Transfer Labware		Source: Grid '14,' Site '2'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
262	Group End		A-tailing

263	Group	Wash after A-tailing
264	Set Variable	SAMPLE_CNT = Number of samples
265	Begin Loop	24 times "wash after a-tailing"
266	Get DiTis	 DiTi aluminium 200 ul
267	Aspirate	  30 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
268	Drop DiTis	 DiTi LiHa Waste
269	End Loop	"wash after a-tailing"
270	Set Variable	SAMPLE_CNT = -1
271	Get DiTis	 DiTi aluminium 200 ul
272	Set Variable	SAMPLE_CNT = Number of samples
273	Begin Loop	24 times "wash after a-tailing_1"
274	Aspirate	  100 µl Helena Water free dispense "PBS" (Col. 1, Rows 3-6)
275	Dispense	  100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
276	End Loop	"wash after a-tailing_1"
277	Set Variable	SAMPLE_CNT = -1
278	Drop DiTis	 DiTi LiHa Waste
279	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
280	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
281	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
282	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
283	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
284	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
285	Set Variable	SAMPLE_CNT = Number of samples
286	Begin Loop	24 times "wash after a-tailing_2"

287	Get DiTis	1-4	DiTi aluminium 200 ul
288	Aspirate	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
289	Drop DiTis	1-4	DiTi LiHa Waste
290	End Loop		"wash after a-tailing_2"
291	Set Variable		SAMPLE_CNT = -1
292	Get DiTis	1-4	DiTi aluminium 200 ul
293	Set Variable		SAMPLE_CNT = Number of samples
294	Begin Loop		24 times "wash after a-tailing_3"
295	Aspirate	1-4	100 µl Helena Water free dispense "PBS" (Col. 1, Rows 3-6)
296	Dispense	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
297	End Loop		"wash after a-tailing_3"
298	Set Variable		SAMPLE_CNT = -1
299	Drop DiTis	1-4	DiTi LiHa Waste
300	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
301	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
302	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
303	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
304	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
305	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
306	Set Variable		SAMPLE_CNT = Number of samples
307	Begin Loop		24 times "wash after a-tailing_4"
308	Get DiTis	1-4	DiTi aluminium 200 ul
309	Aspirate	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
310	Drop DiTis	1-4	DiTi LiHa Waste

311	End Loop		"wash after a-tailing_4"
312	Set Variable		SAMPLE_CNT = -1
313	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '2'; Narrow (MCA96 1)
314	Group End		Wash after A-tailing
315	Group		Adaptor ligation
316	Set Variable		SAMPLE_CNT = Number of samples
317	Begin Loop		24 times "adaptor ligation"
318	Get DiTis	1-4	DiTi aluminium 50ul
319	Aspirate	1-4	13 µl Helena Water free dispense "Adaptors" (Col. 1, Rows 1-4) , 1 option
320	Dispense	1-4	13 µl Water free dispense DiTi 50 "Working plate" (Col. 1, Rows 1-4) , 1 option
321	Drop DiTis	1-4	DiTi LiHa Waste
322	End Loop		"adaptor ligation"
323	Set Variable		SAMPLE_CNT = -1
324	Set Variable		SAMPLE_CNT = Number of samples
325	Begin Loop		24 times "adaptor ligation_1"
326	Get DiTis	1-4	DiTi aluminium 200 ul
327	Aspirate	1	13 µl Helena Water free dispense "Labware1" (Col. 1, Row 4)
328	Aspirate	2	13 µl Helena Water free dispense "Labware1" (Col. 1, Row 4)
329	Aspirate	3	13 µl Helena Water free dispense "Labware1" (Col. 1, Row 4)
330	Aspirate	4	13 µl Helena Water free dispense "Labware1" (Col. 1, Row 4)
331	Dispense	1-4	13 µl Water free dispense DiTi 50 "Working plate" (Col. 1, Rows 1-4) , 1 option
332	Mix	1-4	5 x 45 µl Water free dispense DiTi 50 "Working plate" (Col. 1, Rows 1-4) , 1 option
333	Drop DiTis	1-4	DiTi LiHa Waste
334	End Loop		"adaptor ligation_1"

335	Set Variable	SAMPLE_CNT = -1
336	Get DiTis	Grid 32; Site: 4 (DiTi 200ul Nested MCA96) Fetch 8 rows and 12 columns
337	Begin Loop	3 times "4 first wells"
338	Start Timer	6
339	Wait for Timer	Timer 6 : 300 sec
340	Mix	35 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-8)
341	End Loop	"4 first wells"
342	Drop DiTis	Grid 32; Site: 19 (DiTi Nested Waste)
343	Transfer Labware	Source: Grid '32,' Site '4'; Destination: Grid '32', Site '19'; Narrow (MCA96 1)
344	Transfer Labware	Source: Grid '14,' Site '2'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
345	Start Timer	7
346	Wait for Timer	Timer 7 : 60 sec
347	Set Variable	SAMPLE_CNT = Number of samples
348	Begin Loop	24 times "adaptor ligation _1"
349	Get DiTis	1-4 DiTi aluminium 200 ul
350	Aspirate	1-4 26 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
351	Drop DiTis	1-4 DiTi LiHa Waste
352	End Loop	"adaptor ligation _1"
353	Set Variable	SAMPLE_CNT = -1
354	Group End	Adaptor ligation
355	Group	Wash after adaptor ligering
356	Get DiTis	1-4 DiTi aluminium 200 ul
357	Set Variable	SAMPLE_CNT = Number of samples
358	Begin Loop	24 times "wash efter adaptor ligation"

359	Aspirate	1-4	100 µl Helena Water free dispense "IPWB2" (Col. 1, Rows 3-6)
360	Dispense	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
361	End Loop		"wash efter adaptor ligation"
362	Set Variable		SAMPLE_CNT = -1
363	Drop DiTis	1-4	DiTi LiHa Waste
364	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
365	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
366	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
367	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
368	Start Timer		8
369	Wait for Timer		Timer 8 : 60 sec
370	Set Variable		SAMPLE_CNT = Number of samples
371	Begin Loop		24 times "wash after adaptor ligation_1"
372	Get DiTis	1-4	DiTi aluminium 200 ul
373	Aspirate	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
374	Drop DiTis	1-4	DiTi LiHa Waste
375	End Loop		"wash after adaptor ligation_1"
376	Set Variable		SAMPLE_CNT = -1
377	Get DiTis	1-4	DiTi aluminium 200 ul
378	Set Variable		SAMPLE_CNT = Number of samples
379	Begin Loop		24 times "wash after adaptor ligation_2"
380	Aspirate	1-4	100 µl Helena Water free dispense "IPWB2" (Col. 1, Rows 3-6)
381	Dispense	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
382	End Loop		"wash after adaptor ligation_2"

383	Set Variable	SAMPLE_CNT = -1
384	Drop DiTis	 DiTi LiHa Waste
385	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
386	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
387	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
388	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
389	Start Timer	9
390	Wait for Timer	Timer 9 : 60 sec
391	Set Variable	SAMPLE_CNT = Number of samples
392	Begin Loop	24 times "wash after adaptor ligation_3"
393	Get DiTis	 DiTi aluminium 200 ul
394	Aspirate	  100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
395	Drop DiTis	 DiTi LiHa Waste
396	End Loop	"wash after adaptor ligation_3"
397	Set Variable	SAMPLE_CNT = -1
398	Get DiTis	 DiTi aluminium 200 ul
399	Set Variable	SAMPLE_CNT = Number of samples
400	Begin Loop	24 times "wash after adaptor ligation_4"
401	Aspirate	  100 µl Helena Water free dispense "PBS" (Col. 1, Rows 3-6)
402	Dispense	  100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
403	End Loop	"wash after adaptor ligation_4"
404	Set Variable	SAMPLE_CNT = -1
405	Drop DiTis	 DiTi LiHa Waste
406	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)

407	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
408	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
409	Transfer Labware		Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
410	Start Timer		10
411	Wait for Timer		Timer 10 : 60 sec
412	Set Variable		SAMPLE_CNT = Number of samples
413	Begin Loop		24 times "wash after adaptor ligation_5"
414	Get DiTis	1-4	DiTi aluminium 200 ul
415	Aspirate	1-4	100 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
416	Drop DiTis	1-4	DiTi LiHa Waste
417	End Loop		"wash after adaptor ligation_5"
418	Set Variable		SAMPLE_CNT = -1
419	Group End		Wash after adaptor ligering
420	Group		Elution
421	Get DiTis	1-4	DiTi aluminium 200 ul
422	Set Variable		SAMPLE_CNT = Number of samples
423	Begin Loop		24 times "Elution"
424	Aspirate	1	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 5)
425	Aspirate	2	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 5)
426	Aspirate	3	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 5)
427	Aspirate	4	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 5)
428	Dispense	1-4	50 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
429	End Loop		"Elution"
430	Set Variable		SAMPLE_CNT = -1

431	Drop DiTis	1-4	DiTi LiHa Waste
432	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '2'; Narrow (MCA96 1)
433	User Prompt		"Add 4 µl of Proteinase K manually and put plate in the thermal cycler for reverse cross linking. " sound : once
434	Get DiTis		Grid 32; Site: 5 (DiTi 200ul Nested MCA96) Fetch 8 rows and 12 columns
435	Begin Loop		10 times "Mix loop 4 first wells"
436	Start Timer		11
437	Wait for Timer		Timer 11 : 180 sec
438	Mix		35 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-8)
439	End Loop		"Mix loop 4 first wells"
440	Drop DiTis		Grid 32; Site: 19 (DiTi Nested Waste)
441	Transfer Labware		Source: Grid '32,' Site '5'; Destination: Grid '32', Site '19'; Narrow (MCA96 1)
442	Transfer Labware		Source: Grid '14,' Site '2'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
443	User Prompt		"Put new plate on site 1 " sound : once
444	Start Timer		12
445	Wait for Timer		Timer 12 : 60 sec
446	Set Variable		SAMPLE_CNT = Number of samples
447	Begin Loop		10 times "Elution 1"
448	Get DiTis	1-4	DiTi aluminium 200 ul
449	Aspirate	1-4	50 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
450	Dispense	1-4	50 µl Helena Water free dispense "New plate" (Col. 1, Rows 1-4) , 1 option
451	Drop DiTis	1-4	DiTi LiHa Waste
452	End Loop		"Elution 1"
453	Set Variable		SAMPLE_CNT = -1

454	Group End		Elution
455	Group		Size selection + elution with EB
456	Get DiTis	1-4	DiTi aluminium 200 ul
457	Set Variable		SAMPLE_CNT = Number of samples
458	Begin Loop		24 times "size selection"
459	Mix	1	2 x 50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
460	Aspirate	1	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
461	Mix	2	2 x 50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
462	Aspirate	2	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
463	Mix	3	2 x 50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
464	Aspirate	3	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
465	Mix	4	2 x 50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
466	Aspirate	4	50 µl Helena Water free dispense "Labware1" (Col. 1, Row 6)
467	Dispense	1-4	50 µl Helena Water free dispense "New plate" (Col. 1, Rows 1-4) , 1 option
468	End Loop		"size selection"
469	Set Variable		SAMPLE_CNT = -1
470	Drop DiTis	1-4	DiTi LiHa Waste
471	Get DiTis		Grid 32; Site: 6 (DiTi 200ul Nested MCA96) Fetch 8 rows and 12 columns
472	Mix		50 µl Helena Water free dispense "New plate" (Col. 1, Rows 1-8)
473	Drop DiTis		Grid 32; Site: 19 (DiTi Nested Waste)
474	Start Timer		13
475	Transfer Labware		Source: Grid '32,' Site '6'; Destination: Grid '32', Site '19'; Narrow (MCA96 1)
476	Wait for Timer		Timer 13 : 300 sec
477	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '32', Site '19'; Narrow (MCA96 1)

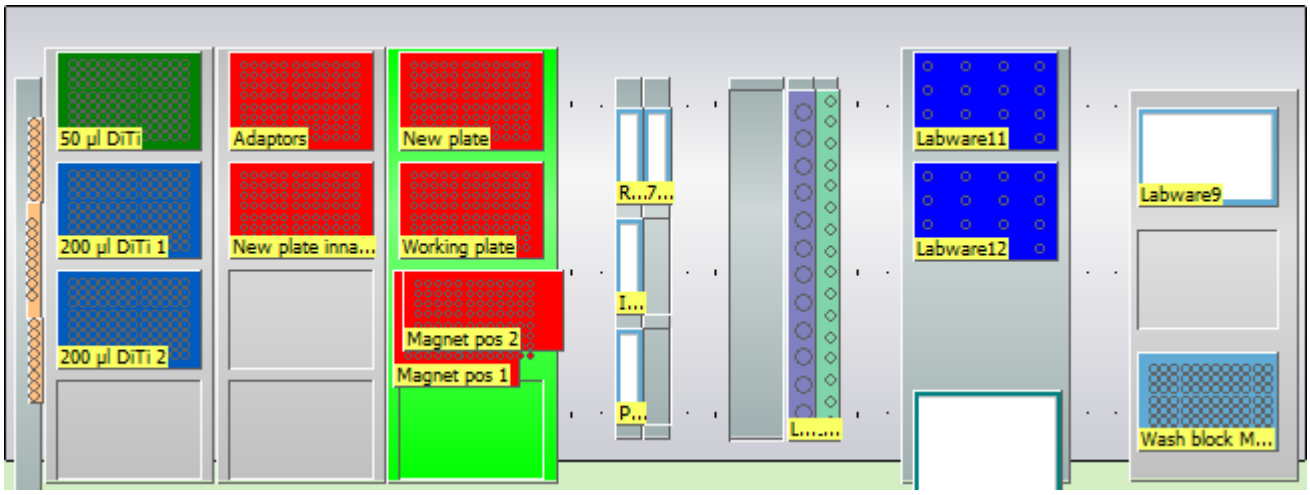
478	Transfer Labware	Source: Grid '14,' Site '1'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
479	Start Timer	14
480	Wait for Timer	Timer 14 : 60 sec
481	Set Variable	SAMPLE_CNT = Number of samples
482	Begin Loop	24 times "size selection_1"
483	Get DiTis	 DiTi aluminium 200 ul
484	Aspirate	  50 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
485	Drop DiTis	 DiTi LiHa Waste
486	End Loop	"size selection_1"
487	Set Variable	SAMPLE_CNT = -1
488	Get DiTis	 DiTi aluminium 200 ul
489	Set Variable	SAMPLE_CNT = Number of samples
490	Begin Loop	24 times "size selection_wash"
491	Mix	  5 x 150 µl Helena Water free dispense "70 percent EtOH" (Col. 1, Rows 3-6)
492	Aspirate	  150 µl Helena Water free dispense "70 percent EtOH" (Col. 1, Rows 3-6)
493	Dispense	  150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
494	End Loop	"size selection_wash"
495	Set Variable	SAMPLE_CNT = -1
496	Drop DiTis	 DiTi LiHa Waste
497	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
498	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
499	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
500	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
501	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)

502	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
503	Set Variable	SAMPLE_CNT = Number of samples
504	Begin Loop	24 times "size selection_wash_2"
505	Get DiTis	DiTi aluminium 200 ul
506	Aspirate	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
507	Drop DiTis	DiTi LiHa Waste
508	End Loop	"size selection_wash_2"
509	Set Variable	SAMPLE_CNT = -1
510	Get DiTis	DiTi aluminium 200 ul
511	Mix	5 x 150 µl Helena Water free dispense "70 percent EtOH" (Col. 1, Rows 3-6)
512	Set Variable	SAMPLE_CNT = Number of samples
513	Begin Loop	24 times "size selection_wash_3"
514	Aspirate	150 µl Helena Water free dispense "70 percent EtOH" (Col. 1, Rows 3-6)
515	Dispense	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
516	End Loop	"size selection_wash_3"
517	Set Variable	SAMPLE_CNT = -1
518	Drop DiTis	DiTi LiHa Waste
519	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
520	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
521	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
522	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
523	Transfer Labware	Source: Grid '14,' Site '3'; Destination: Grid '14', Site '4'; Narrow (MCA96 1)
524	Transfer Labware	Source: Grid '14,' Site '4'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
525	Set Variable	SAMPLE_CNT = Number of samples

526	Begin Loop		24 times "size selection_wash_4"
527	Get DiTis	1-4	DiTi aluminium 200 ul
528	Aspirate	1-4	150 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
529	Drop DiTis	1-4	DiTi LiHa Waste
530	End Loop		"size selection_wash_4"
531	Set Variable		SAMPLE_CNT = -1
532	Start Timer		15
533	Wait for Timer		Timer 15 : 300 sec
534	Get DiTis	1-4	DiTi aluminium 200 ul
535	Set Variable		SAMPLE_CNT = Number of samples
536	Begin Loop		24 times "EB"
537	Aspirate	1	30 µl Helena Water free dispense "Labware1" (Col. 1, Row 7)
538	Aspirate	2	30 µl Helena Water free dispense "Labware1" (Col. 1, Row 7)
539	Aspirate	3	30 µl Helena Water free dispense "Labware1" (Col. 1, Row 7)
540	Aspirate	4	30 µl Helena Water free dispense "Labware1" (Col. 1, Row 7)
541	Dispense	1-4	30 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
542	End Loop		"EB"
543	Set Variable		SAMPLE_CNT = -1
544	Drop DiTis	1-4	DiTi LiHa Waste
545	Transfer Labware		Source: Grid '14,' Site '3'; Destination: Grid '14', Site '2'; Narrow (MCA96 1)
546	Set Variable		SAMPLE_CNT = Number of samples
547	Begin Loop		24 times "EB_2"
548	Get DiTis	1-4	DiTi aluminium 200 ul
549	Mix	1-4	20 x 30 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-4) , 1 option

550	Drop DiTis	1-4	DiTi LiHa Waste
551	End Loop		"EB_2"
552	Set Variable		SAMPLE_CNT = -1
553	Start Timer		16
554	Wait for Timer		Timer 16 : 150 sec
555	Set Variable		SAMPLE_CNT = Number of samples
556	Begin Loop		24 times "EB_2"
557	Get DiTis	1-4	DiTi aluminium 200 ul
558	Mix	1-4	5 x 30 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-4) , 1 option
559	Drop DiTis	1-4	DiTi LiHa Waste
560	End Loop		"EB_2"
561	Set Variable		SAMPLE_CNT = -1
562	Start Timer		17
563	Wait for Timer		Timer 17 : 150 sec
564	Set Variable		SAMPLE_CNT = Number of samples
565	Begin Loop		24 times "EB_2_"
566	Get DiTis	1-4	DiTi aluminium 200 ul
567	Mix	1-4	5 x 30 µl Helena Water free dispense "Working plate" (Col. 1, Rows 1-4) , 1 option
568	Drop DiTis	1-4	DiTi LiHa Waste
569	End Loop		"EB_2_"
570	Set Variable		SAMPLE_CNT = -1
571	Transfer Labware		Source: Grid '14,' Site '2'; Destination: Grid '14', Site '3'; Narrow (MCA96 1)
572	Start Timer		17
573	Wait for Timer		Timer 17 : 60 sec

574	Group End		Size selection + elution with EB
575	Group		PCR
576	User Prompt		"Put new plate on site 1 " sound : three times
577	Set Variable		SAMPLE_CNT = Number of samples
578	Begin Loop		24 times "PCR"
579	Get DiTis		DiTi aluminium 50ul
580	Aspirate	 	20 µl Helena Water free dispense "Magnet pos 1" (Col. 1, Rows 1-4) , 1 option
581	Dispense	 	20 µl Helena Water free dispense "New plate" (Col. 1, Rows 1-4) , 1 option
582	Drop DiTis		DiTi LiHa Waste
583	End Loop		"PCR"
584	Set Variable		SAMPLE_CNT = -1
585	Get DiTis		DiTi aluminium 200 ul
586	Set Variable		SAMPLE_CNT = Number of samples
587	Begin Loop		24 times "pcr"
588	Aspirate	 	6.6 µl Helena Water free dispense "Labware1" (Col. 1, Row 8)
589	Aspirate	 	6.6 µl Helena Water free dispense "Labware1" (Col. 1, Row 8)
590	Aspirate	 	6.6 µl Helena Water free dispense "Labware1" (Col. 1, Row 8)
591	Aspirate	 	6.6 µl Helena Water free dispense "Labware1" (Col. 1, Row 8)
592	Dispense	 	6.6 µl Water Detect 500µL "New plate" (Col. 1, Rows 1-4) , 1 option
593	End Loop		"pcr"
594	Set Variable		SAMPLE_CNT = -1
595	Drop DiTis		DiTi LiHa Waste
596	Group End		PCR


50 µl DiTi
200 µl DiTi 1
200 µl DiTi 2
Adaptors
New plate inna...
New plate
Working plate
Magnet pos 2
Magnet pos 1
R...7...
I...
P...
L.....
Labware11
Labware12
Labware9
Wash block M...