NASA Life Sciences Data Archive
Investigator name: Kenneth Baldwin
Mission (Payload): STS-58 (SLS-2)
Experiment title (ID): Effects of Zero-Gravity Exposure on Biochemical and Metabolic Properties of Skeletal Muscle (178127 3/3)
File name/Inventory ID: Preflight data folder

t=0 - L+0 animals 11/5

	Sol.	Plant.	MG	VI	VC	TA
#1 1.16 287	110	339	650	98	873	477
	127			129		
(Glycerol)	(86)	(236)	W, R, M (199 128, 264)	(85)	W, R, M (341, 160, 364)	(351)
#2 1.05 288	118	382	689	66	969	527
	122		W R M 230, 185, 292	117	W R M 442, 175, 318	
	(69)	(283)		(80)		(381)
#3 1.16 271	113	283	613	91	908	430
	119		W R M 192, 138, 248	115	295, 142, 438	
	(80)	(229)		(97)		(324)
#4 1.11 277	126	302	643	83	914	536
	122		W R M 234, 200, 214	107	W R M 432, 168, 292	
	(87)	(233)		(74)		(385)
#5 1.20 296	115	357	644	134	936	548
	128		W R M 260 168 232	110	W R M 342 189 420	
	(68)	(265)		(78)		(363)

t=0 -

L+O animals

11/5

	Sol.	Plant	MG	VI	VC	TA
length						
#1 1.16	110	339	650	98	873	477
287	127			129		
(Glycerol)	(86)	(236)	W, R, M (199 128, 264)	(85)	W, R, M (341, 160, 364)	(351)
#2 1.05	118	382	689	66	969	527
288	122		W R M 230, 185, 292	117	W R M 442, 175, 318	
	(69)	(283)		(80)		(381)
#3 1.16	113	283	613	91	908	430
271	119		W R M 192, 138, 248	115	295, 142, 438	
	(80)	(229)		(97)		(324)
#4 1.11	126	302	643	83	914	536
277	122		W R M 234, 200, 214	107	W R M 432, 168, 292	
	(87)	(233)		(74)		(385)
#5 1.29	115	357	644	134	936	548
296	128		W R M 260 168 232	110	W R M 342 189 420	
	(68)	(265)		(78)		(363)

since Oct 12 CONTROL / SL-3 group

Bodywt Length	Soleus	Plant	MG (R M W)	VI	VL (R M W)	TA
1) #172 (R)	142	437	806 (188 272 295)	89	1239 (259 546 422)	617
330 1.15 (L)	149			98		
weight of piece	(108)	(340)		(72)		(472)
	(141)					
2) #176	114	389	782 (149 300 275)	109	1026 (172 466 383)	632
336 1.26	112			111		
	(74)	(298)		(78)		(419)
	(336)					
3) #181 1.28	118	393	773 (159 248 310)	106	1056 (156 332 505)	592
294	122			86		
(low food intake)	(81)	(293)		(64)		(366)
4) #185 1.17	118	328	605 (149 237 216)	101	1128 (146 425 507)	593
277	118			91		
(low food intake)	(84)	(245)		(62)		(394)
	(426)					
5) #189 1.25	135	411	679 (167 257 241)	118	1149 (176 641 332)	651
323	145			115		
kinks in tail	(93)	(321)		(92)		(427)
	(433)					
6) #194 1.25	139	513	917 (242 308 281)	91	1342 (219 534 575)	684
366	153			138		
	(92)	(398)		(90)	519	(446)
					1119	
$\bar{X}$ 321	121		729		560	617

(weight) of pieces **Flight** switched #2 to animal 3 NOV 1, 1993
#3 to animal 2

# number (time) Body wt Length	Soleus	Plant	MG (R M W)	VI	VL (R M W)	TA
1) #175 (12:30)	(R) 86	341	745 (192, 232, 310)	71	981 (150, 406, 420)	630
342 1.17	(L) 105			77		
weight of pieces	(81)	(266)		(48)		(455)
	155					
	(279)			(216)		
2) #180 (1:35)	101	370	781 (157, 251, 328)	86	986 (206, 418, 357)	740
342 1.18	112			106		
	(77)	(288)		(86)		(483)
	311					
3) #184 (3:10)	91	346	621 (148, 176, 232)	90	1.159 (189, 504, 474)	680
352 1.29	107			84		
	(71)	(273)		(55)		(468)
	289					
4) #188 (4:25)	96	323	626 (122, 219, 284)	82	924 (141, 302, 478)	664
351 1.25	107			88		
	(68)	(238)		(49)		(453)
	289					
5) #193 5:20	76	265	509 (120, 125, 201)	82	807 (132, 237, 430)	482
314 1.21	72			89		
	(46)	(189)		(63) Bad orientation		(309)
	236					
$\bar{X}$ 340	95 (279)	329	656	85	971	639

Body wt	Length	Sol	Plant	MG (R M W)	VI	VL (R M W)	TA
#1 325	1215	139	394	724 143 298 275	101	1025 290 390 420	563
		148 (119)	388 (331)		99 (79)		(481)
#2 292	1.21	123		722 196 243 254	90	1020 191 352 469	509
		140 (116)	334 (290)		70 (60)		(392)
#3 321	1.16	140	353	721 200 262 247	74	1114 200 426 482	625
		166 (121)	(296)		76 (53)		(490)

For the above muscles - generate mg/muscle data

L+O Control	R+O Control	R+O Flight

this way we can express net protein lost or gained during 14 days.

distal ←

Bodywt	Length	Soleus	Plant	(RMW) MG	VI	(RMW) VL	TA
1) 221	1.025	83 85	206 229	536 (109 174 252)	55 68	638 (102 295 207)	376
2) 234	1.08	79 88	222 222	~~[illegible]~~ 542 (102 217 232)	55 67	~~[illegible]~~ 624 (134 290 200)	394 385
3) 222	1.010	106 117	214 242	482 (114 160 224)	~~[illegible]~~71 65	677 (140 309 209)	367 422
4) 220	0.996	76 84	200 221	496 (155 120 231)	52 46	637 (118 227 304)	381
5) 214	1.04	90 107	182 214	440 (141 136 151)	54 54	546 (106 187 240)	380