

NASA Life Sciences Data Archive

Investigator name: Kenneth Souza

Mission (Payload): STS-47 (SL-J)

Experiment title (ID): Effect of Weightlessness on Development of Amphibian Eggs (178256)

File name/Inventory ID: SL-J FEE Preliminary Results

SPACELAB - J FROG EMBRYOLOGY EXPERIMENT PRELIMINARY RESULTS

1/22/93

NUMBER OF FROGS FLOWN	4		
TOTAL NUMBER OF EGGS OBTAINED	612		
	<u>1 - G</u>	<u>0 - G</u>	
NUMBER OF EGGS PER SAMPLE	288	324	
PERCENT FERTILIZED (all eggs)	73%	91%	
PERCENT NORMAL (at hatching)	63%	85%	
NUMBER LIVE TADPOLES RETURNED	46	110	
POSTFLIGHT EGG QUALITY OF ADULT FROGS			
% FERTILIZED	#118	95%	-
	#121	96%	-
	#23	100%	-
	#102	100%	-

ANALYSES REMAINING INCLUDE:

HISTOLOGY AND MORPHOMETRICS

- CLEAVAGE PLANES, BLASTOMERE & BLASTOCOEL SIZE & SHAPE
- CORRELATION OF SEP AND D/V AXIS
- 0-G vs 1-G DEV. RATE, BODY AND ORGAN SIZE

BEHAVIORAL STUDIES

- TAIL BEAT FREQUENCY, SWIMMING VELOCITY
- BUCCAL PUMPING RATE
- POSITION IN WATER COLUMN

PERCENT OF TADPOLES METAMORPHOSED

MALE/FEMALE RATIO

FECUNDITY OF FROGS FERTILIZED IN SPACE