

Fiscal Year:	FY 2013	Task Last Updated:	FY 07/03/2013
PI Name:	Cooper, Maya M.S.		
Project Title:	Literature Review of Factors Affecting Food and Nutrient Stability		
Division Name:	Human Research		
Program/Discipline:	HUMAN RESEARCH		
Program/Discipline--Element/Subdiscipline:	HUMAN RESEARCH--Space Human Factors Engineering		
Joint Agency Name:	TechPort:	No	
Human Research Program Elements:	(1) SHFH :Space Human Factors & Habitability (archival in 2017)		
Human Research Program Risks:	None		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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Comments:			
Project Type:	GROUND	Solicitation / Funding Source:	Directed Research
Start Date:	09/30/2013	End Date:	03/31/2015
No. of Post Docs:	No. of PhD Degrees:		
No. of PhD Candidates:	No. of Master' Degrees:		
No. of Master's Candidates:	No. of Bachelor's Degrees:		
No. of Bachelor's Candidates:	Monitoring Center: NASA JSC		
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Flight Program:			
Flight Assignment:	NOTE: Extended to 3/31/2015 (original end date was 9/1/2014) per JSC HRP (Ed., 8/13/14)		
Key Personnel Changes/Previous PI:			
COI Name (Institution):			
Grant/Contract No.:	Directed Research		
Performance Goal No.:			
Performance Goal Text:			
Task Description:	<p>NASA, in planning for long duration missions, has an imperative to predict and plan for the shifting nutritional quality of space food provisions to ensure sustainment of crew health and performance. No cumulative source of nutrient kinetic information is available for perusal. The purpose of this task is to conduct a literature review of nutrient degradation kinetics under different processing, storage, and formulation conditions. The review will identify where information is insufficient and must be measured empirically in the space food system to determine the expected loss of nutrition.</p> <p>The Specific Aims are as follows:</p> <ol style="list-style-type: none"> 1. Review current scientific knowledge on degradation kinetics of naturally present nutrients under various processing and storage conditions that potentially will be used for spaceflight foods, and within the context of different ingredient 		

	interactions and product structural matrices.
	2. Review current scientific knowledge on fortification nutrient stability under various processing and storage conditions that potentially will be used for spaceflight foods, and within the context of different ingredient interactions and product structural matrices.
Rationale for HRP Directed Research:	The review will contain both published and internal NASA documents on space food stability - information not accessible to the general public. Additionally, the processing variables which impact the stability of space food are well understood by the space food experts assigned to task.
Research Impact/Earth Benefits:	
Task Progress:	New project for FY2013.
Bibliography Type:	Description: (Last Updated: 04/23/2019)