

**Table 1. Selected institutes and corresponding food packaging testing and design capabilities**

Selected Institutes	Location	Testing and Design				
		Permeability and Migration	Distribution	Shelf Life	More Sustainable	Package Design
Argentine Packaging Institute	Buenos Aires, Argentina					
California Polytechnic State University	San Luis Obispo, California, USA					
Campden BRI	Gloucestershire, UK					
Clemson University	Clemson, South Carolina					
Danish Technological Institute	Taastrup, Denmark					
Fraunhofer IVV	Freising, Germany					
Hunan Huniversity	Hunan, China					
Packaging Technology Center	Campinas, Brazil					
Technical Institute of Aragón (ITAINNOVA)	Zaragoza, Spain					
Jinan University	Guangzhou, China					
Kasetsart University	Bangkok, Thailand					
LABEN- Chile	Santiago, Chile					
Michigan State University	East Lansing, USA					
NARO	Tsukuba, Japan					
PROTEN - University of Chile	Santiago, Chile					
RISE	Stockholm, Sweden					
Rochester Institute Technology (RIT)	Rochester, New York, USA					
University of Monterrey - ABRE/UDEM	Nuevo Leon, Mexico					
Victoria University	Melbourne, Australia					
VTT Research	Epsoo, Finland					
ZHAW	Zurich, Switzerland					

*Darker colors denote a higher degree of capability and lighter colors denote unknown or less capability*

*Selected institutes shown are not inclusive of all institutes with food packaging expertise*

*(Excerpt from a Technology Evaluation on global institutes conducted by Packaging Technology and Research, LLC, 2019)*

**Table 2. Selected institutes and corresponding food packaging research capabilities**

Selected Institutes	Research				
	Intelligent and Active Packaging	Polymer Material Science	Glass Material Science	Metal Material Science	Paperboard Material Science
Argentine Packaging Institute					
California Polytechnic State University					
Campden BRI					
Clemson University					
Danish Technological Institute					
Fraunhofer IVV					
Hunan Huniversity					
Packaging Technology Center					
Technical Institute of Aragón (ITAINNOVA)					
Jinan University					
Kasetsart University					
LABEN- Chile					
Michigan State University					
NARO					
PROTEN - University of Chile					
RISE					
Rochester Institute Technology (RIT)					
University of Monterrey - ABRE/UEDEM					
Victoria University					
VTT Research					
ZHAW					

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*(Excerpt from a Technology Evaluation on global institutes conducted by Packaging Technology and Research, LLC, 2019)*



## Focused compelling food packaging expertise



*Dr. Claire Sand is a Global Packaging Leader with 30+ years of broad experience in the food science and packaging spectrum. Sand leads food packaging efforts involving packaging solutions to food waste and more sustainable packaging, as well as provides compelling technology business cases and implementation roadmaps for innovative technologies. Dr. Sand is Owner and Founder of Packaging Technology and Research, LLC., and Adjunct Professor, and holds a doctorate in Food Science and Nutrition from the University of Minnesota and MS and BS in Packaging from Michigan State University.*



CalPoly Adjunct professor



MICHIGAN STATE UNIVERSITY

Michigan State University Adjunct professor



University of Minnesota Adjunct professor



IFT  
feeding the minds that feed the world

IFT Fellow and monthly Packaging columnist for Food Technology magazine



IUFoST Global Food Packaging Curricula Head



Journal of Food Science Reviewer



PAC Consortium on Food Waste CoChair



Packaging Science and Technology Editorial Board



Phi Tau Sigma Strategic Relations & Affairs Chair



Author



Category Manager



Principal



Technical Business Manager



Packaging – Gerber Baby Food

*“I am passionate about leading efforts to reduce climate change by preventing food waste with more sustainable packaging.”*

- Solutions using Strategy and Science
- Learn from PTR with presentations and articles at <http://www.packagingtechnologyandresearch.com/thought-leadership.html>
- See the reverse for a few featured case studies

# Packaging Technology & Research Case Studies



## Strategic Direction

Paper Company



**60+**

### PRODUCTS

Identified OTR and MVTR requirement within 30 categories



**1-5**

### YEARS

Built R&D pipeline to direct existing and new material development using new switching drivers



**1**

### PACKAGE

New chilled ready meal patented package launched to replace CPET



## Science Advisor

Food Manufacturer



**2x**

### SHELF LIFE

Using product, process, MAP and barrier technologies



**12%**

### LOWER

Packaging costs by optimizing packaging materials



**3**

### PACKAGES

Launched in C and Club Stores



## Sustainability

Food Manufacturer



**1,3,5**

### YEAR

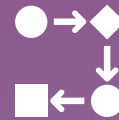
Plans to implement more sustainable packaging for each existing product line



**11**

### SOLUTIONS

Defined for more sustainable packaging on existing structures



**4**

### STRATEGIES

To reduce food waste with no preservatives including value chain solutions



## Food Loss Waste (FLW) Reduction

ReFED - Nonprofit



**16+**

### TRILLION

Reduction in FLW identified via 40 packaging solutions



**8**

### CATEGORIES

Assessed and quantified FLW impactz



**12**

### PATHS

Implementation paths built