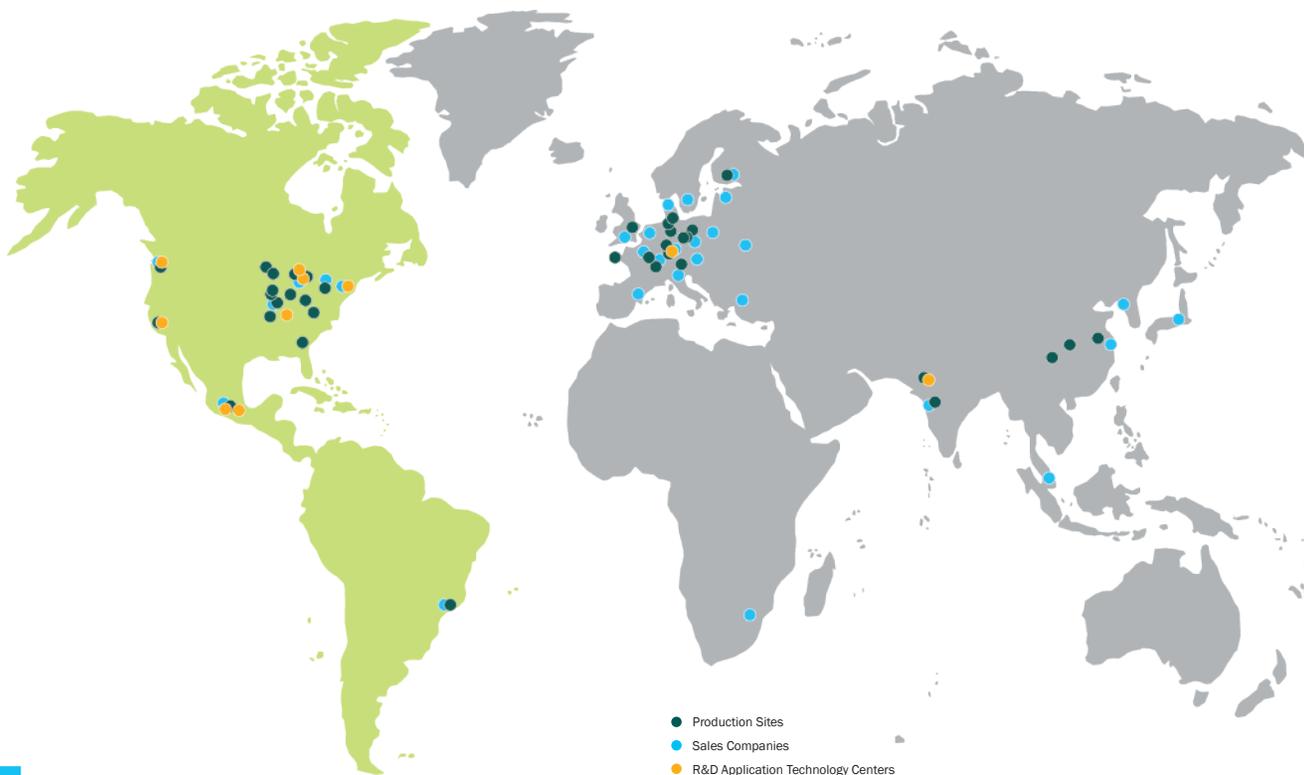




Fibers for Life.



JRS FIBER SOLUTIONS
**Multi-Functional.
Scientifically Proven.**

FIBER ENRICHMENT

- Improves stool quality (fecal bulk)
- Calorie free ingredient
- Non digestible, insoluble fiber
- Promotes satiation for weight control

STRUCTURE AND STRENGTH

- Prevents breakage in finished products
- Improves kibble stability and uniformity
- Increases chew time

PROCESSING STABILITY

- Prevents syneresis and gel separation
- Stable in pH and high heat environments
- Interacts well with other ingredients

OVERALL PET HEALTH

- Increased nutrient digestability¹
- Hairball reduction²
- Enhanced dental hygiene and plaque removal³
- Promotes positive palatability
- Helps prevent diseases

¹Manohar, C.B., Abhilekha, P.M., & Sharadamma, K.C. (2012). Evaluation of Dietary Fiber Source in Extruded Diet on Nutrient Digestibility in Dogs. Thai Association for Laboratory Animal Science, 280.

²Beynen, A.C., Middelkoop, J., & Saris, D.H.J. (2011). Clinical Signs of Hairballs in Cats Fed a Diet Enriched with Cellulose. American Journal of Animal and Veterinary Sciences, 6.

³Beynen, A.C., Altena, F.V., & Visser, E.A. (2010). Beneficial Effect of a Cellulose-Containing Chew Treat on Canine Periodontal Disease in a Double-Blind, Placebo-Controlled Trial. American Journal of Animal and Veterinary Sciences, 5(3), 192-195.

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AAFCO APPROVED

Pet Food Product Overview

- Cellulose
- Oat Fiber
- Apple Fiber
- Alginates
- Sugarcane Fiber
- Psyllium

www.jrsusa.com

Every fiber sparks innovations for Pet Food

JRS has always been a believer of a better, sustainable future. For over 60 years, JRS Animal Nutrition has provided the best quality sustainable fibers for the well-being of pets. Our longstanding expertise and technical competency, in conjunction with our state-of-the-art development center, provides a comprehensive product range of plant based dietary fibers which will enhance your pet food formulations. So, improve your pet food quality with JRS Fiber Solutions.

Don't leave your market success to chance!

			Pet Food Applications											Product Specifications		
			Extruded Products	Baked Products	Canned Products/ Wet	Semi-moist Products	Injection Molded Products	Dry Mixes/ Powders	Frozen/ Fresh Products	High Fat Liquids/ Emulsions	Low Fat Liquids/Milk	Gravies/ Toppers	Avg. Fiber Length(µm)	Water Binding ¹	% TDF ²	
ARBOCEL®	BWW 40	Powdered Cellulose	•	•	•	•	•					200	Medium	96.0		
	BWW 40-C	Powdered Cellulose Pellets	•									—	Medium	96.0		
	BC 300	Powdered Cellulose	•	•	•		•	•				500	High	96.0		
	BWW 40-C-EF	Extra Fine Cellulose Carrier	•					•				300	Medium	96.0		
	FIF 400	Premium Cellulose Powder										2000	High	96.0		
SOLKA-FLOC®	SK 200	Powdered Cellulose	•	•	•	•	•					35	Low	96.0		
	SK 900	Powdered Cellulose	•	•	•	•	•					120	High	96.0		
	SG US	Special Granular Cellulose	•		•							—	Medium	96.0		
	SK ULTLD	Low Dust Powdered Cellulose	•		•							300	Medium	96.0		
VITACEL®	HF 401	Oat Fiber	•	•					•			100	Low	89.2		
	HF 200	Oat Fiber	•	•	•		•		•			130	High	94.0		
	AF 401	Apple Fiber	•	•	•	•						80	High	55.0		
	SF 601	Sugarcane Fiber	•	•	•	•						40	Low	95.0		
Canadian Harvest®	P95	Psyllium	•	•	•				•	•	•	250	High	85.0		
	HF 200-58	Oat Fiber	•		•							107	Low	89.0		
	HF200-150	Oat Fiber	•		•	•						245	Low	89.0		
VIVAPUR®	Alginates			•				•	•	•	—	High	99.0			
ARBOCEL® Dental	SP1000	Cellulose Pearls		•			•					—	Low	96.0		

¹Water binding capacity: Low is 200 - 400%; Medium is 401 - 600%; High is > 601%
²As-Is Basis based on AOAC 991.43



FRESH/FROZEN PET FOODS

- Use of drip water in the freezing process
- Less ice crystal formation
- Maintain shape and structure of the final product
- No leakage of liquids in the defrosting phase



WET PET FOOD

- very high water and fat binding capacity
- insoluble fibers imitate meat fibrils - perfect meat like structure
- reliable prevention of syneresis and gel separation
- synergistic effects with emulsifiers and hydrocolloids
- stable in difficult pH and heat conditions



SEMI-MOIST PET FOOD

- increase in water and fat binding capacity
- positive influence on microbiological stability (aw-value)
- rich crude fiber and calorie-free
- adds nutritional value



DRY PET FOOD

- crude fiber enrichment
- calorie-free filler, i.e. for diet food
- excellent healthy aspects, i.e. for dental hygiene and hairball diets
- improved stability of extrudates and pellets
- considerably less abrasion due to the improved surface structure
- prevents oil leakage
- faster and even drying process due to fibers drainage effect
- pressure and temperature resistant reducing burning or discolor under extreme extruder parameters



SNACKS AND TREATS

- add no calories to the formulation
- less breaking in baked products
- ideal dental hygiene effects
- multifunctional properties, i.e. stabilization of texture, anti-hairball effect
- stabilizing effect, i.e. in fillings for coextruded products