

# Development of a Rugged Sugar Method for Animal Feeds

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# Sugar Analysis by HPAEC-PAD

- Single Lab Validation published in Journal of AOAC International, Vol. 99(2), Ellingson et al. 2016
- Method improvements
  - Sample Prep
  - Internal Standard (Arabinose)
  - Post column pump for constant [NaOH] on electrode
  - Eliminates re-equilibration time (45 → 30 minute)



# Precision results

## Selected data from SLV and Improved Method

Matrix	Analyte	Method Needs Statement %RSD <sub>r</sub>	Mean Concentration	SLV %RSD <sub>r</sub> (n=4, 3 days)	Improved Method %RSD <sub>r</sub> (n=6)
Wet Cat Food	Sucrose	5%	0.12%	4.9%	2.7%
Dry Dog Food	Sucrose	5%	2.25%	6.3%	1.4%
Horse Feed	Sucrose	5%	1.86%	2.3%	0.9%
Pig Feed	Sucrose	5%	2.28%	6.4%	3.3%
Pig Feed	Maltose	5%	0.45%	21.3%	2.6%
Pig Feed	Lactose	4%	9.99%	4.9%	0.6%
Milk Replacer	Lactose	3%	33.1%	6.9%	4.8%

# AOAC ERP Process

Stakeholders

Expert Review Panel (ERP)

Standard Method Performance Requirements (SMPR)

Call for methods

Needs

\$Funding for ERP

Stakeholder/ERP representation at AOAC

Collaborative labs

## Contact information

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