

# ***Calculations through Operations<sup>®</sup>***

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***Trouble-Free Sorbent  
Formulation and Delivery***



# Bring Precision and Predictability to your Active Packaging Processes

## Calculations through Operations®

*Calculations through Operations®* cohesively joins Multisorb Technologies' technical knowledge with customized intelligent sorbents (oxygen absorbers, desiccants, and odor absorbers) and industry standard dispensing equipment to deliver a tailor-made, turn-key sorbent solution.

*Calculations through Operations®* provides:

- technical support from highly skilled active-packaging experts,
- a customized sorbent developed specifically for your product and packaging, and
- easy integration of the sorbent dispenser with your current packaging lines.

*Calculations through Operations®* provides a simplified solution that offers design, development, and dispensing of optimized sorbent, resulting in reduced spoilage, expanded distribution potential, and increased profits!



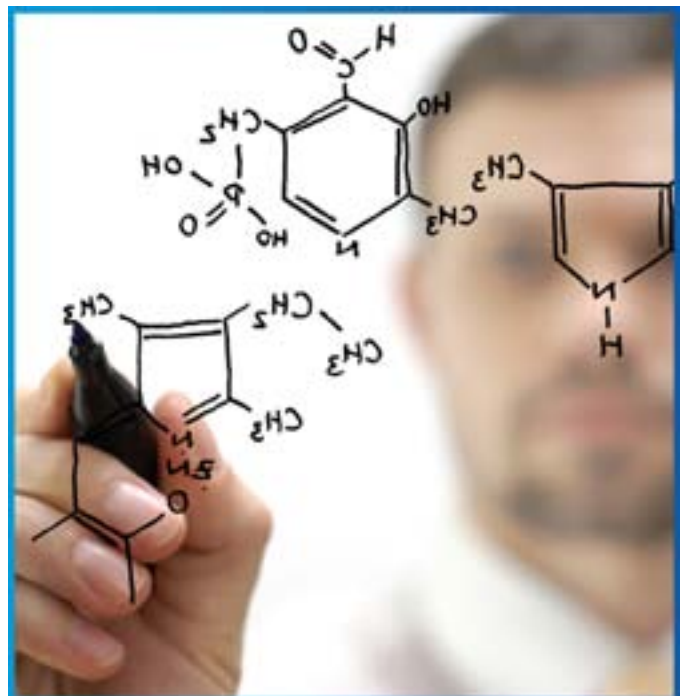
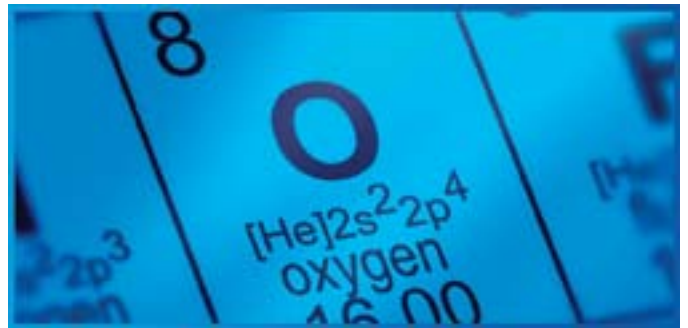
# Calculations through Operations<sup>®</sup>

## Calculations

Experienced packaging scientists will formulate the precise sorbent needed for your product. Multisorb's experts will use their extensive knowledge of food science through the evaluation of the food's water activity ( $A_w$ ) and means of degradation and spoilage (e.g., color change, mold growth, rancidity) to determine whether a desiccant or sorbent is required.

An optimized solution is formulated with the consideration of several factors:

- the product's physical characteristics (moisture content, fat content, pH, net weight, etc),
- packaging data (e.g., dimensions, free-space, oxygen / moisture permeability, type of closure),
- the residual oxygen or moisture within the packaging environment;
- the distribution and storage environment, and
- the desired shelf life.



**Calculations through Operations**<sup>®</sup> takes a holistic approach to determining sorbent requirements by examining the entire development process from design through dispensing. This provides a streamlined process. Your customized sorbent is developed well before your product gets to its packaging stage and accurate, dependable dispensing of the sorbent is ensured.

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Choosing an optimized sorbent means determining the proper sorbent type and capacity needed to achieve the targeted shelf life of a given food product.

Optimized sorbent solutions can

- manage moisture by maintaining an optimal equilibrium relative humidity (ERH) in the packaging headspace and water activity ( $A_w$ ) in the food product and
- reduce or eliminate oxidative degradation in oxygen-sensitive products.

All formulations are available in three formats to meet your needs.

 **Drop-In**

 **Fit-In**

 **Built-In**

 available with  
**IntelliSorb**<sup>™</sup>



***Calculations through Operations<sup>®</sup>***  
***provides a simplified, one-stop solution***  
***with proven results to reduce spoilage,***  
***expand distribution potential,***  
***and increase profits!!***

# ***Operations***

*Calculations through Operations<sup>®</sup>* offers seamless integration of sorbent placement in the product packaging by combining the benefits of Multisorb's sorbent with Multisorb's Active-Pak Automation (APA) series of dispensers. The APA series of dispensers precisely inserts a sorbent packet or card into your product packaging.

A variety of systems are available depending on your sorbent needs, including

- StripPax<sup>®</sup> System = StripPax<sup>®</sup> Packets + StripPax<sup>®</sup> Dispensers
- FreshPax<sup>®</sup> System = FreshPax<sup>®</sup> Packets + FreshPax<sup>®</sup> Dispensers
- FreshCard<sup>®</sup> System = FreshCard<sup>®</sup> Packets + FreshCard<sup>®</sup> Dispensers
- MAPLOX<sup>®</sup> Program = FreshPax CR<sup>®</sup> + MAPLOX<sup>™</sup> dispenser

Multisorb's APA series of dispensers are designed for easy integration into a variety of commercial packaging lines including bottling, HFFS/VFFS pouching machinery, and forming (thermoforming & cold forming).

Features include:

- Multiple speed options (60 to 325 per minute depending on model)
- Proof of insertion
- Precision cutting of StripPax<sup>®</sup> and FreshPax<sup>®</sup> Packets
- FIFO controls
- Full packet count reconciliation
- User friendly interface
- Quick change guides for tool-less product changeover
- Mobility to support multiple product lines
- FDA-compliant materials in contact with canister/packet/SF
- EC compliant designs with CSA registration available
- Optional dry air or inert gas purge for extended exposure time during packaging operations
- Optional splicing station cabinet allows spools to be linked for continuous operation



APA-1000 Packet Dispenser



APA-5000 Card Dispenser



APA-500 Packet Dispenser

