



HUMIDITY NEUTRAL OXYGEN SCAVENGERS

PharmaKeep® is an innovative line of polymer-based oxygen scavenging capsules and packets, developed and distributed jointly by Airnov Healthcare Packaging and Mitsubishi Gas Chemical Company, Inc. (MGC). PharmaKeep oxygen scavengers extend the shelf life and efficacy of pharmaceutical and nutraceutical products by protecting against oxygen degradation and oxidative reactions.

- **Humidity neutral:** PharmaKeep is humidity neutral, absorbing oxygen at either low or high relative humidity levels, and can be used in conjunction with a desiccant. Compared to Iron based oxygen scavengers, Pharmakeep will not release moisture to the drug product.
- **High speed insertion:** Due to their rigidity, PharmaKeep capsules can be used on high-speed insertion machine, typically feeding 300 to 600 capsules per minute. Packets can also be automated by using roll form packets.
- **Full protection:** PharmaKeep can be paired with Airnov's Oxy-Guard® oxygen barrier bottles for an efficient protective package solution.
- **Degradation avoidance:** With Pharmakeep, the chemical and physical degradation of drug products can be mitigated, sometimes visible in extreme color change.

with Pharmakeep



without Pharmakeep



Oxidative degradation – besides moisture – is one of the major pathways for degradation of pharmaceuticals, probiotics and other healthcare products during production, isolation processes and storage.

Airnov offers various configurations of PharmaKeep canisters and packets to accommodate different packaging needs.

PharmaKeep capsules (CD) and Pharmakeep packets (KD) have equivalent absorbing function and are available as two-in-one moisture and oxygen absorbing products.

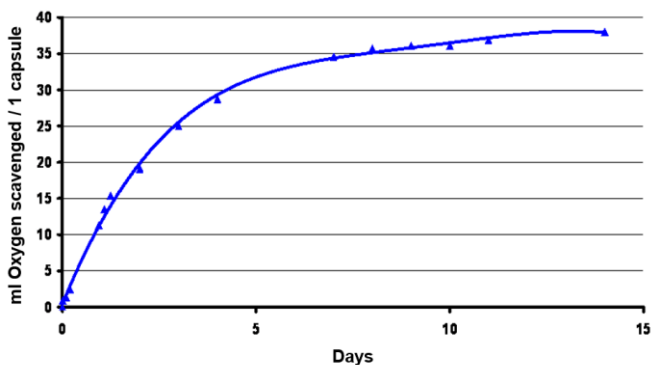
Specified Performance of PharmaKeep products

(evaluated at 25°C, 75%RH, 7 days; refer to our measurement method of Pharmakeep performances)

Capsule CD-1G & Packet KD-10S: >10ml oxygen & >0.07g moisture.

Capsule CD-2.15G & Packet KD-20: >20ml oxygen & >0.15g moisture.

Packet KD-400: >400ml oxygen & > 3g moisture.



Oxygen absorption capacity is specified at 20 ml of O₂ per CD-2.15g at day 7.



Pharmakeep oxygen scavengers are available in capsule and packet configuration

Pharmakeep® canisters & packets comply with FDA & EU regulations for use in pharmaceutical applications and are registered in a Drug Master File.

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