

# CONSULTANCY REPORT

Sample Report

## Desiccant Selection for Foil Pouch with a 24-Month Shelf-Life Requirement

**BASIC** ● ○ ○

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INNOVATIONS

Experts in Humidity and Moisture Control

## Introduction & Client Requirements

██████████ Ltd require a low humidity environment to be maintained inside a 12/9/50 pouch (i.e. 9µm of aluminium within the foil laminate structure).

Each slimline pouch proposed by the client has exterior dimensions of 85 mm x 24mm, with 4mm seals. A twenty-four month shelf-life is required in a European temperate climate. The package is only ever opened *once* by the consumer. The packed product is not sufficiently porous to require complex adsorptions/desorption calculations of its own, nor does it require aggressive drying on package sealing, nor the maintenance of a specific *elevated humidity*.

Given all of the above, the client would like to know what size, format and type of desiccant is best suited to achieve their aim.

## Calculations

For the conditions and specifications above a moisture ingress of 0.05 mg / day into the pouch is calculated.

Based on this value, a total moisture load of 36.5 mg is expected within the 24 months. To adsorb this moisture a silica gel desiccant ██████████ strip is to be placed in the device. Baltimore's high-quality desiccant strips adsorb 250 mg/cm<sup>3</sup>. For a label of 0.6 mm thickness we have a capacity per label area of 15 mg/cm<sup>2</sup>.

Therefore, to adsorb the ingress and account for any part evaporation or packaging losses a label with area 3 cm<sup>2</sup> is recommended.

## Recommendations

Baltimore Innovations recommends that ██████████ uses our slimline Silica Gel Desiccant ██████████ Strip, with dimensions 1.5 x 2.0 x 0.6cm.

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### Further Contact Information

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...to speak to an **Expert Advisor**



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