Diphenylcyclopropenone (DPC)
High Purity—98.9-99.5%

For the treatment of Alopecia areata, totalis, universalis, recalcitrant warts and some cases of metastatic melanoma

Introduction
Diphenylcyclopropenone (2,3-diphenylcycloprop-2-en-1-one or DPC), is a pale fawn coloured solid, which is used extensively for the treatment of alopecia areata, totalis, universalis, recalcitrant warts and some cases of metastatic melanoma. It is a synthetic allergen which induces a hypersensitivity response when applied topically. It achieves this by modulating MHC class II expression in epidermal keratinocytes and induces cytokine mRNA expression of IL-2, IL-8, IL-10 and TNF-α.

Use
Alopecia areata is a common disorder affecting 0.1% of the population. Immunotherapy has proved to be an effective treatment and the agent of choice is DPC. Recalcitrant warts are one of the most common therapeutic problems encountered by the dermatologist. Treatment of recalcitrant warts with contact sensitizer DPC has proved particularly successful. DPC has also been used in the successful treatment of some cases of metastatic melanoma. Details of the therapeutic use of DPC can be found in the References

Examples
1. Figure 1, on the right, is an example of a patient of Alopecia universalis being treated with DPC.1
2. Figure 2, below, is an example of a 71-year-old man with extensive scalp melanoma. (a) The patient showed dramatic regression of his extensive scalp disease within 4 weeks of starting diphenylcyclopropenone immunotherapy. (b) The residual melanin pigmentation gradually faded, and the scalp remained clinically normal 4 1/2 years later, till date of publication.2

Table 1:
Cumulative patient response rate to DPC immunotherapy overtime (El-Zawahry, et al. 2010)3

<table>
<thead>
<tr>
<th>Duration of DPC therapy (months)</th>
<th>Clinically significant hair regrowth, % (no. of patients)</th>
<th>Residual probability of hair regrowth, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1 (1)</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>15.4 (15)</td>
<td>29.6</td>
</tr>
<tr>
<td>12</td>
<td>48.5 (47)</td>
<td>5.9</td>
</tr>
<tr>
<td>18</td>
<td>52.6 (61)</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>55.7 (65)</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Properties
Diphenylcyclopropenone is affected by light and must be stored in total darkness at 4-8°C. If stored under these conditions the compound is stable for up to three years. Full analytical details are provided with each batch. Our product is highly pure. Elemental and mass spectra data is available with each batch to confirm absence of higher molecular weight materials and in particular the precursor α,α-dibromodibenzyl ketone, DBBK.

Treatment
Treatment is carried out under the supervision of a dermatologist, pharmacist or medically trained personnel. Detailed documentation and batch details are provided with each order as well as an example of treatment protocol if required. The amount required will depend on the length of treatment and number of patients. DPC is used in a solution (prepared by a Pharmacist) and the concentration varies up to 3%. Please enquire if uncertain of the quantity to order.

Reference

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