

# R&D Case Study: Vitamins & Supplement Manufacturer

**Our client, a manufacturer of vitamins and supplements, has received a tax credit of over £15,000 from HMRC to reward them for innovative activity carried out in developing a new range of 5-HTP gummy vitamins.**

During the 2019 accounting period, our client decided to branch out in terms of its existing product line and develop a range of **5-HTP gummies** that could be marketed as an aid for sleep and relaxation.

At the time, the concept of a chewable **5-HTP gummy** vitamin was new and supplements existed in tablet form only.

Our client intended that the **5-HTP gummies** have a number of key attributes: a positive effect on an individual's feeling of relaxation and quality of sleep when consumed; be suitable for vegans and not include palm oil; be easily chewable with a pleasant mouth feel and have a strong but pleasant flavour.



At the outset of the project, there was no publicly available information regarding how the effects of **5-HTP** vary when consumed by chewing which could be used to inform the development of the gummies' formulation.

The formulation of **5-HTP** tablets could not be readily adapted or applied to develop a gummy. Therefore, our client was left with no choice but to carry out research and development activity.

The research and development activity carried out involved our client analysing data contained in studies about **5-HTP**

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and the effects of different dosages and developing trial formulations of **5-HTP** and a release agent. When putting together the formulation, work was undertaken to analyse the effects of chewing or the effects of other components within the gummy, including the pectin base, flavouring and additives.

Trial formulations were provided to our client's manufacturing partner in China to be used in trial batches of gummies and then returned to the UK for testing.

The initial batch was found to have only a mild effect on an adult's relaxation and sleep when consumed. Our client adjusted the formula to increase the ratio of **5-HTP** to the release agent and a further batch was produced and delivered for testing.

Once again, our client was concerned that the effects were too mild and the ratio was adjusted. This process continued until our client was satisfied that the gummies had the intended effect. The final formulation removed the release agent to allow for a greater volume of **5-HTP**.

Substantial activity was carried out to create the appropriate flavour; a balance between it being strong whilst not unduly 'artificial' in the way that certain medicinal sweets can taste.

Our client initially focused on two flavours; passionfruit and orange. In order to be vegan friendly, the gummies would need to be

produced using a pectin base, with this being a 'fixed' element of the product.

Our client experimented with alternative flavouring recipes and additives in an attempt to achieve the desired strength and nature of flavour. This resulted in the production of test batches for taste testing as well as gauging their medicinal effects.

After approximately four months of testing, our client was satisfied that it had developed a formulation and recipe for an effective product with a pleasant taste. The gummies were then released to the market.



Customer feedback was mixed at first, with some consumers claiming the effects were not noticeable enough.

This then prompted our client to re-visit the formulation and carry out further research and development activity whereby our client experimented with increases in the proportionate volume of **5-HTP** to increase the effects.

**Corporation tax saving- £15,000 +**



## Meet the Claritas Team:

For more information or to discuss any of the issues raised in this document, please contact one of our R&D experts below:



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