

Bee resin takes the sting out of painful mouth ulcers

By [Claire Bates](#)

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British scientists have created a gel treatment for mouth ulcers that uses a mixture of resin and wax used by honey bees to sterilise their hives.

Although the healing properties of propolis have been known for years, it has not been widely used because the sticky substance is not water soluble and has a strong, off-putting smell.

Now researchers at the University of Bradford have found a way of purifying the medicinal mixture so that it will dissolve in water and loses its pungent odour.



Honey bees create the sticky substance propolis to sterilise and seal their hives. Scientists have adapted it for an ulcer gel

The technique has already led to the development of a new mouth ulcer gel and opens the door to a huge range of other pharmaceutical products.

Research leader Professor Anant Paradkar, said: 'Propolis is a complex chemical mix and a very useful natural product.'

Propolis has been shown to be anti-microbial, anti-fungal, a strong anti-oxidant, non-allergenic and can boost the immune system. It also promotes wound healing and has anaesthetic properties.

'There is a substantial market for propolis-based products – particularly in China, the USA and South Asia.

'The main stumbling block in developing products has been the solubility and odour issues, which our formulation overcomes.'

Professor Paradkar's team has been developing the new technique to purify propolis in collaboration with natural medicine manufacturer, Nature's Laboratory.

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Professor Anant Paradkar with propolis in its unrefined state

Together they have created a new propolis-based mouth ulcer gel, which has better anaesthetic, anti-microbial and anti-fungal properties than gels already on the market and is also safe for use in children.

Professor Paradkar said: 'A problem for mouth gels is that adhesion to the skin membrane inside the mouth is difficult - because of the nature of the surface, the gel can simply slide off.'

'As propolis retains some of its stickiness even in a water soluble formulation, when it is applied to specific areas in the mouth, it adheres more effectively.'

The Centre has gained funding for a Knowledge Transfer Partnership with Nature's Laboratory, to further develop the purification system for use at a larger scale and support the creation of new propolis-based products.