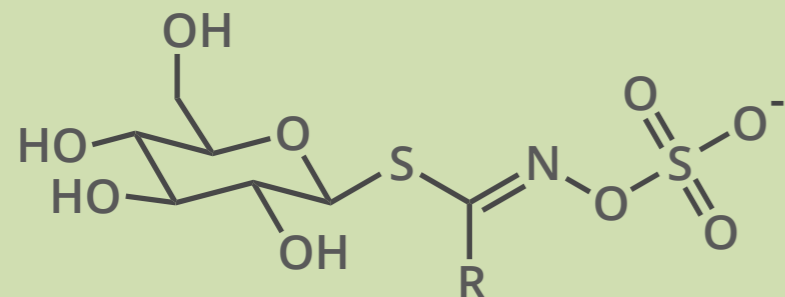


THE CHEMISTRY OF BRUSSELS SPROUTS

THE BITTER TASTE OF SPROUTS

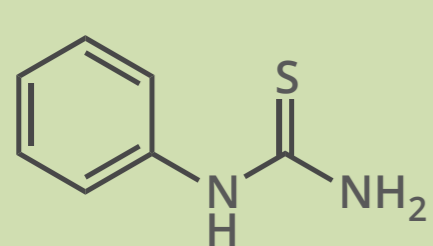


GLUCOSINOLATES

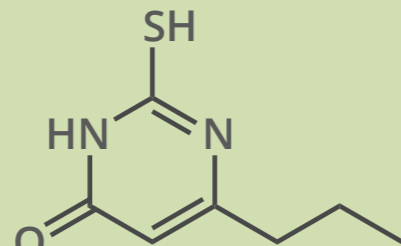
Family of compounds in cruciferous vegetables

Glucosinolates are a class of compounds found naturally in a range of green vegetables, including brussel sprouts. They are broken down into compounds called isothiocyanates when the plant is damaged or cooked.

These isothiocyanates have similarities with the synthetic compounds PTC & PROP. PTC only tastes bitter to around 70% of people. To the other 30%, it is completely tasteless. Although it is not the only factor in dislike of brussels sprouts, ability to taste PTC & PROP and sensitivity to bitter vegetables appear to be strongly correlated, and has a heritable genetic basis.



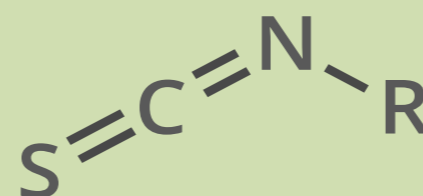
PHENYLTHIOCARBAMIDE
(PTC)



PROPYLTHIOURACIL
(PROP)

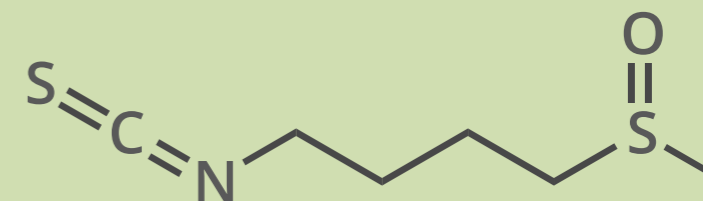


POTENTIAL BENEFITS OF SULFORAPHANE



ISOTHIOCYANATES

Breakdown products of glucosinolates



SULFORAPHANE

Formed from glucosinolates

One of the isothiocyanates that glucosinolates can be broken down into is sulforaphane. This compound is partly responsible for the bitterness of overcooked brussels sprouts, but it is also being studied for its antioxidant properties. Additionally, it has been suggested that it could have a protective effect against neurodegenerative disorders, but more research is required to investigate this.