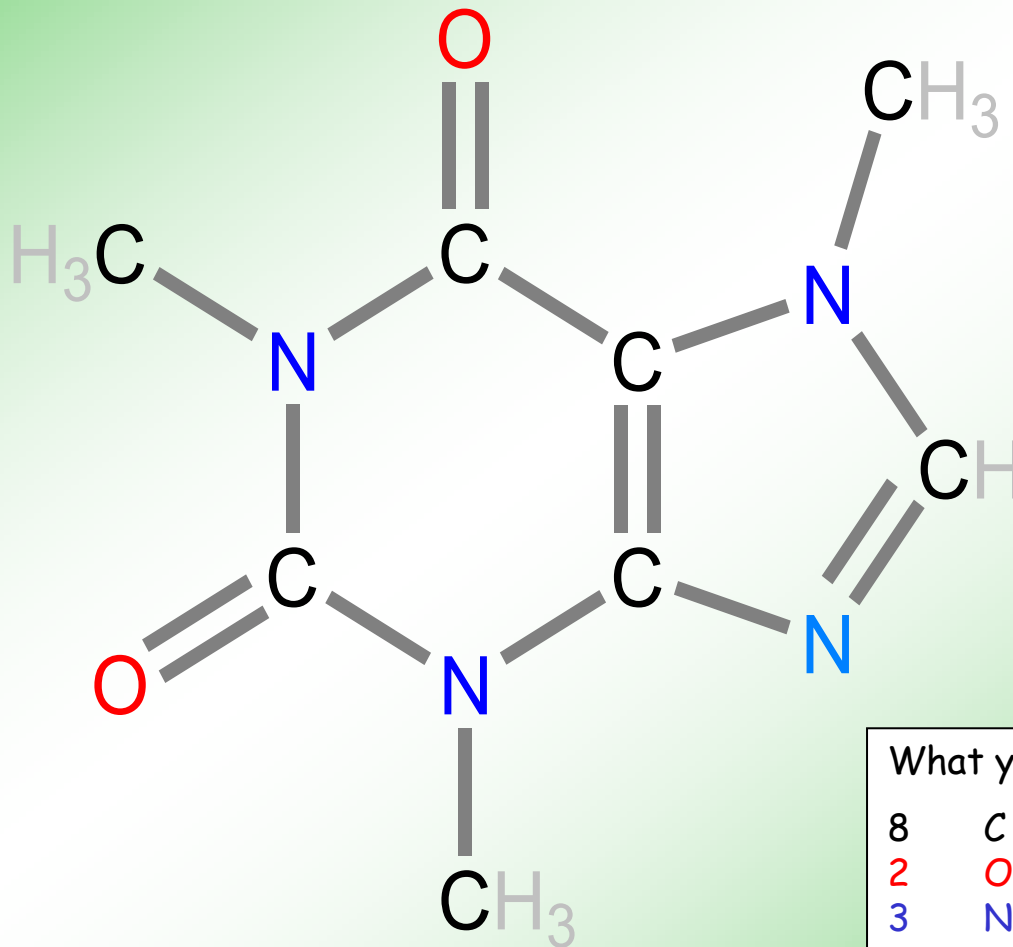


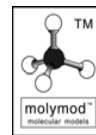
# Caffeine

Stimulant found in tea & coffee



What you will need:

8	C	Carbon (black)
2	O	Oxygen (red)
3	N	Nitrogen (dark blue)
1	N	Nitrogen (light blue)
10	H	Hydrogen (white)
11	/	single bonds (straight)
8	f	double bonds (bendy)



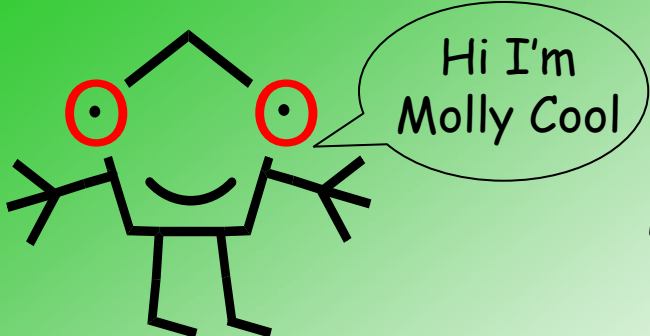
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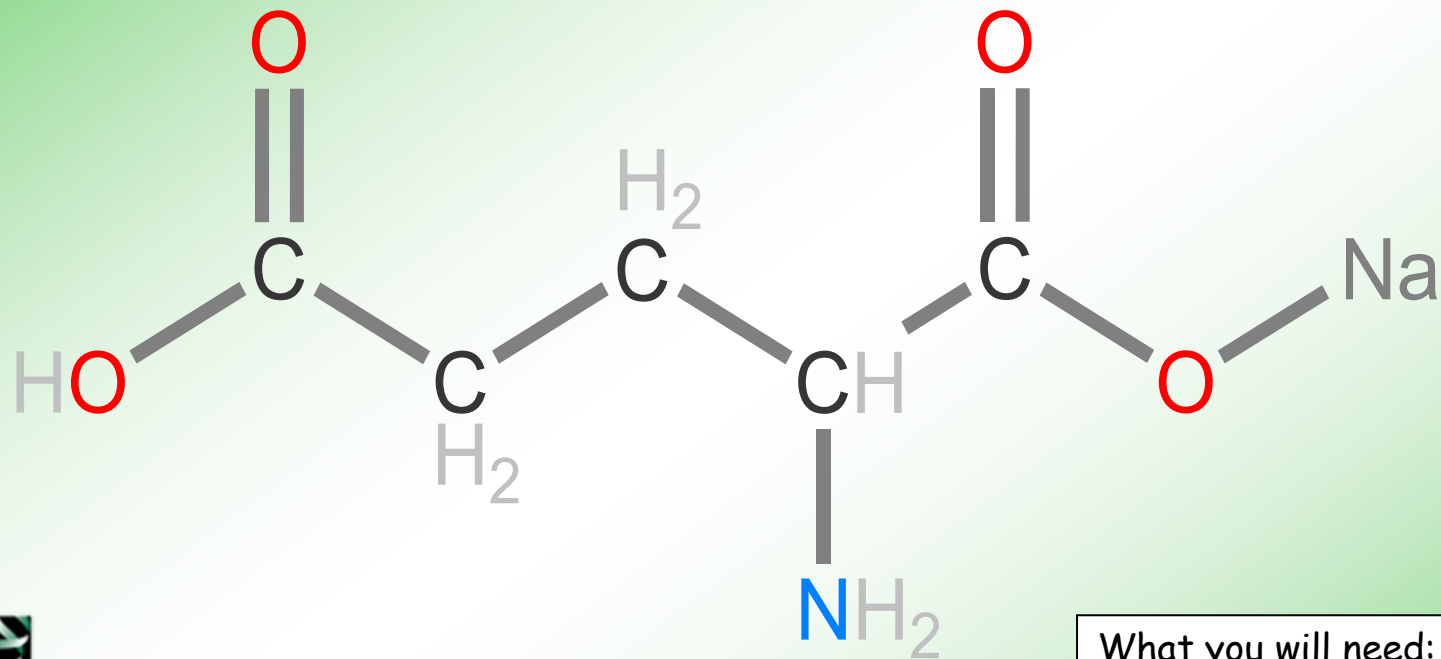
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# MSG

Monosodium glutamate - a flavour enhancer



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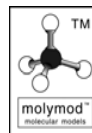
Engineering and Physical Sciences  
Research Council

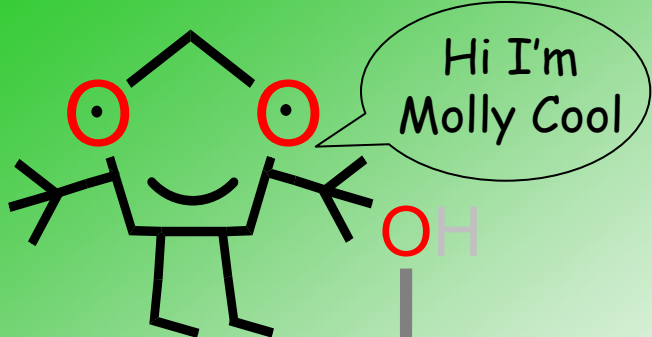
[www.keele.ac.uk/makeitmolecular](http://www.keele.ac.uk/makeitmolecular)

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What you will need:

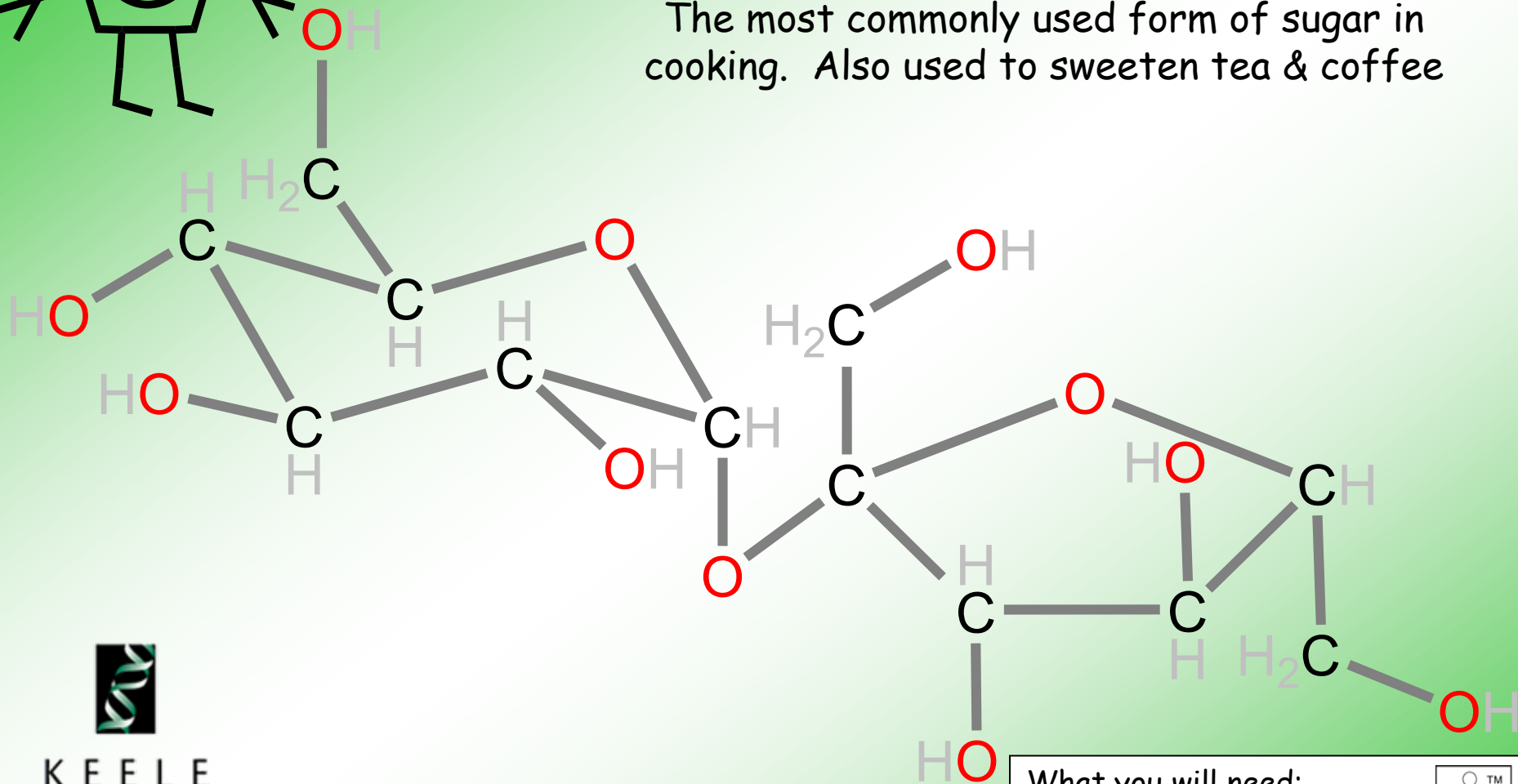
5	C	Carbon (black)
4	O	Oxygen (red)
1	N	Nitrogen (light blue)
1	Na	Sodium (grey)
8	H	Hydrogen (white)
8	/	single bonds (straight)
4	∩	double bonds (bendy)





# Sucrose

The most commonly used form of sugar in cooking. Also used to sweeten tea & coffee



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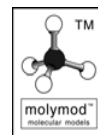
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Research Council

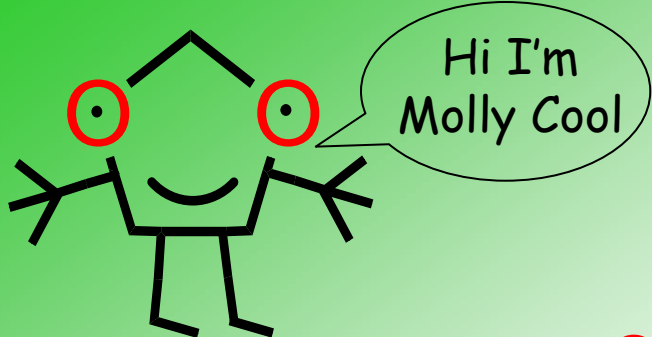
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What you will need:

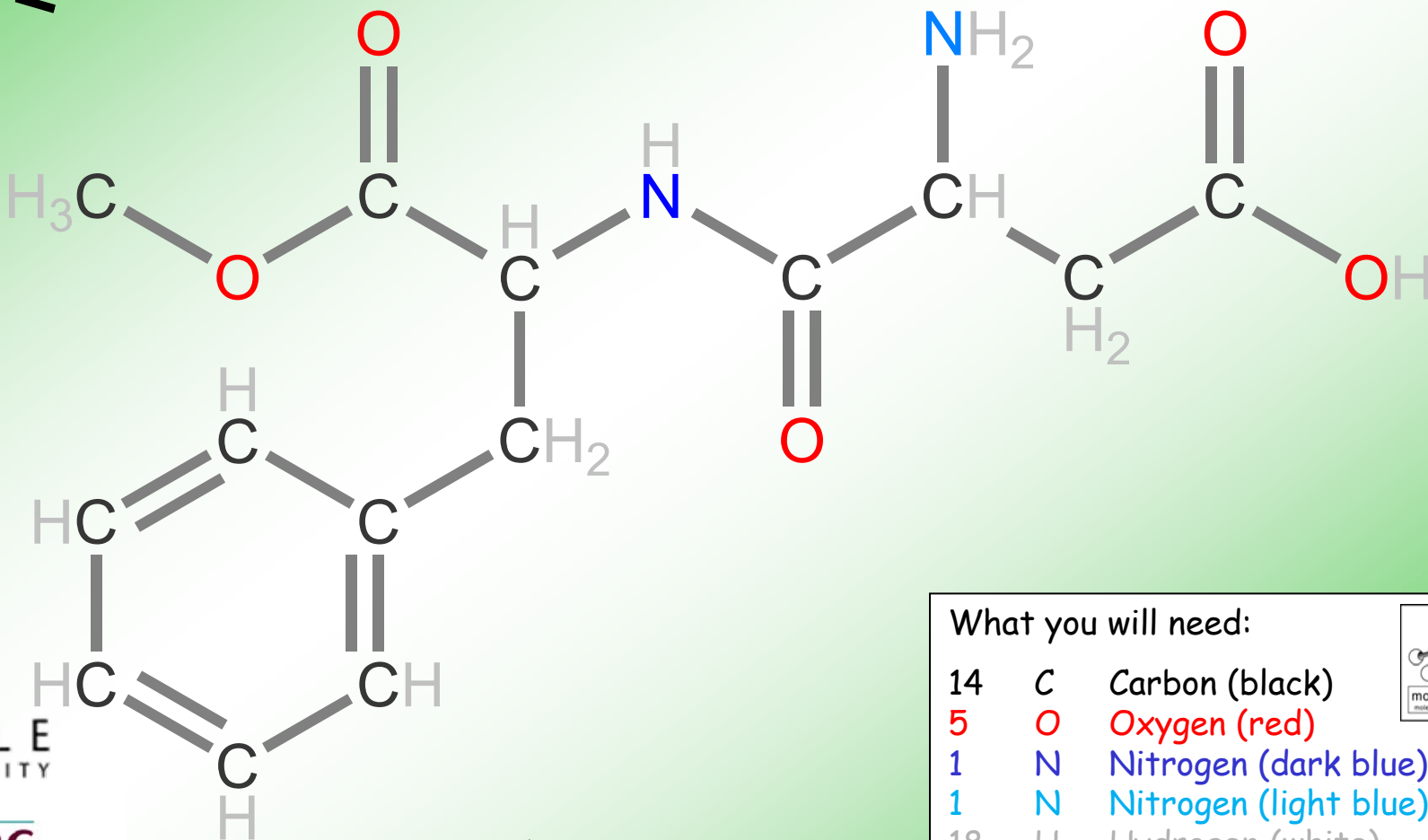
12	C	Carbon (black)
11	O	Oxygen (red)
22	H	Hydrogen (white)
24	/	single bonds (straight)





# Aspartame

An artificial sweetener 200 times sweeter than sugar



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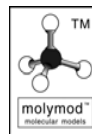
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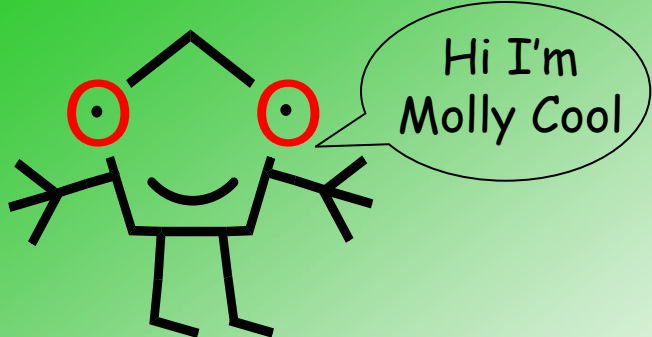
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What you will need:

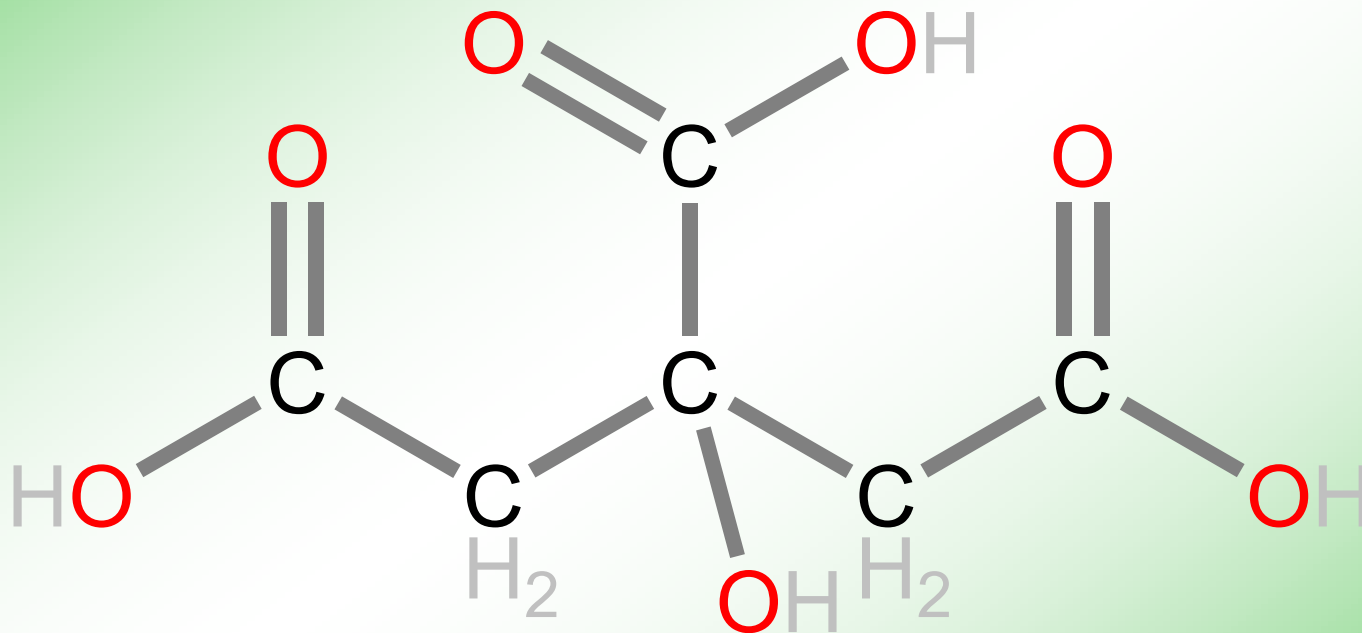
- |    |   |                         |
|----|---|-------------------------|
| 14 | C | Carbon (black)          |
| 5  | O | Oxygen (red)            |
| 1  | N | Nitrogen (dark blue)    |
| 1  | N | Nitrogen (light blue)   |
| 18 | H | Hydrogen (white)        |
| 15 | / | single bonds (straight) |
| 12 | ∩ | double bonds (bendy)    |





# Citric acid

The acid found in oranges and lemons



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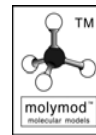
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Research Council

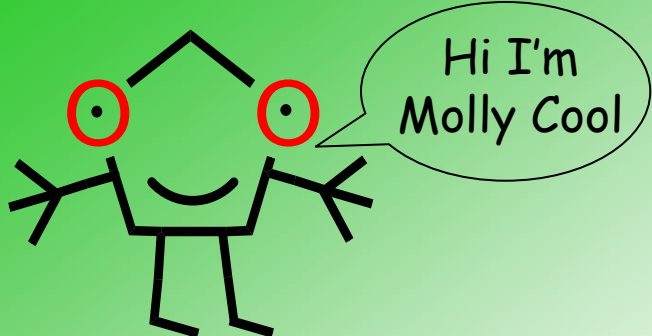
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What you will need:

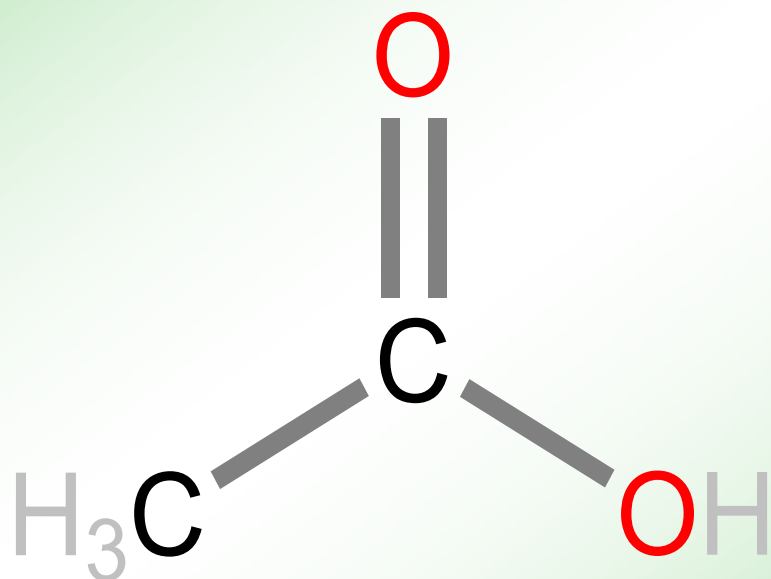
6	C	Carbon (black)
7	O	Oxygen (red)
8	H	Hydrogen (white)
9	/	single bonds (straight)
6	f	double bonds (bendy)





# Acetic Acid

The acid in vinegar



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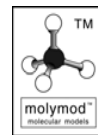
[www.keele.ac.uk/makeitmolecular](http://www.keele.ac.uk/makeitmolecular)

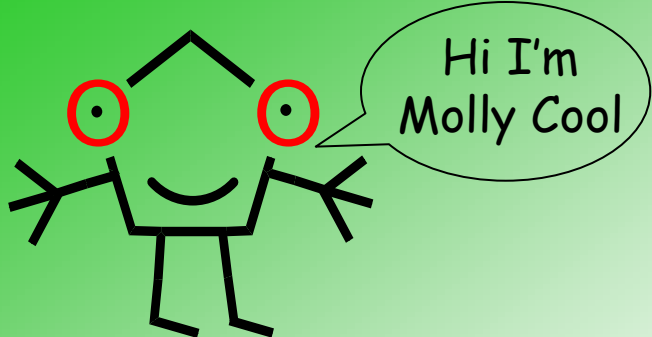
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What you will need:

2 C Carbon (black)  
2 O Oxygen (red)  
4 H Hydrogen (white)

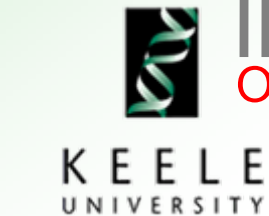
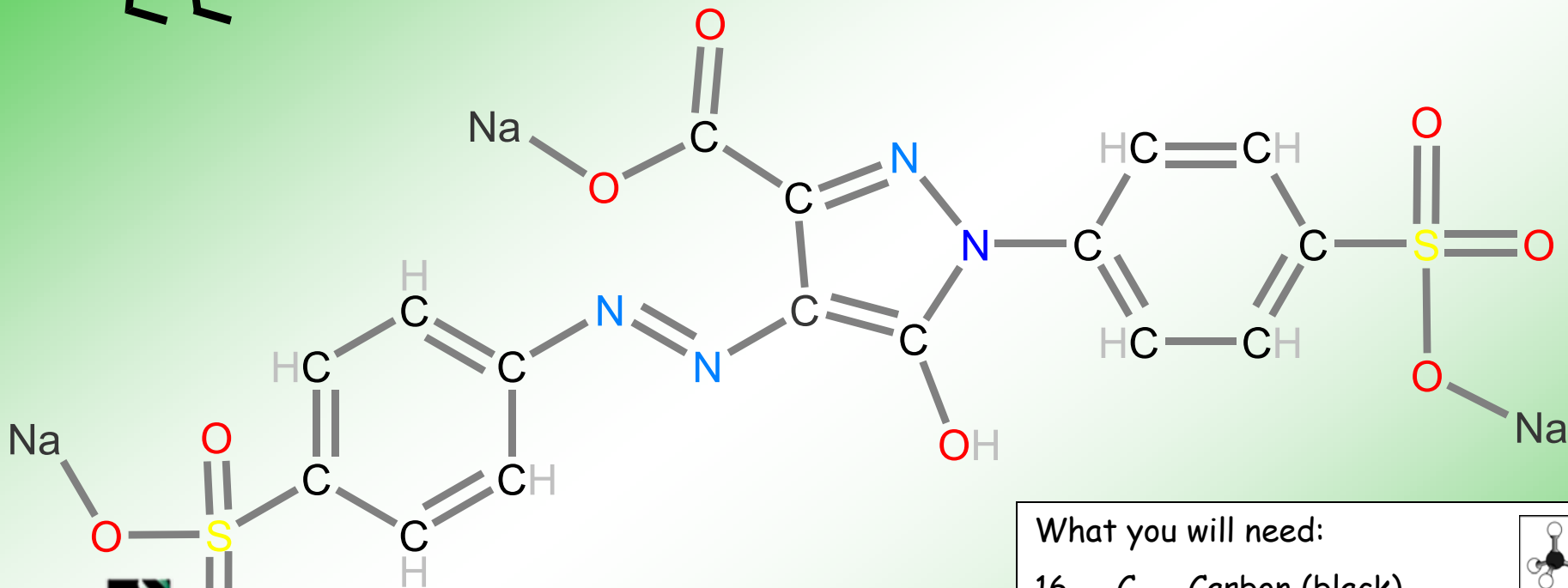
2 / single bonds (straight)  
2 ∩ double bonds (bendy)





# Tartrazine

A bright yellow molecule often used to colour orange squash. It is also known as E102



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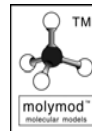
Engineering and Physical Sciences  
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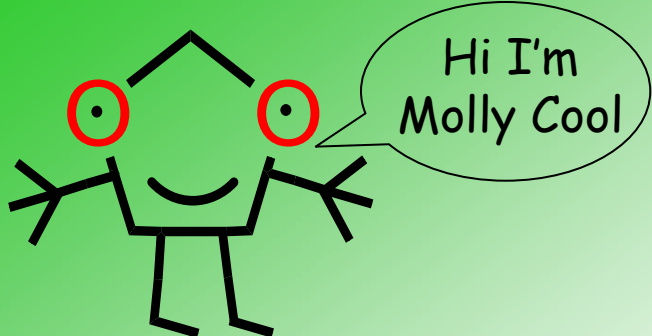
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What you will need:

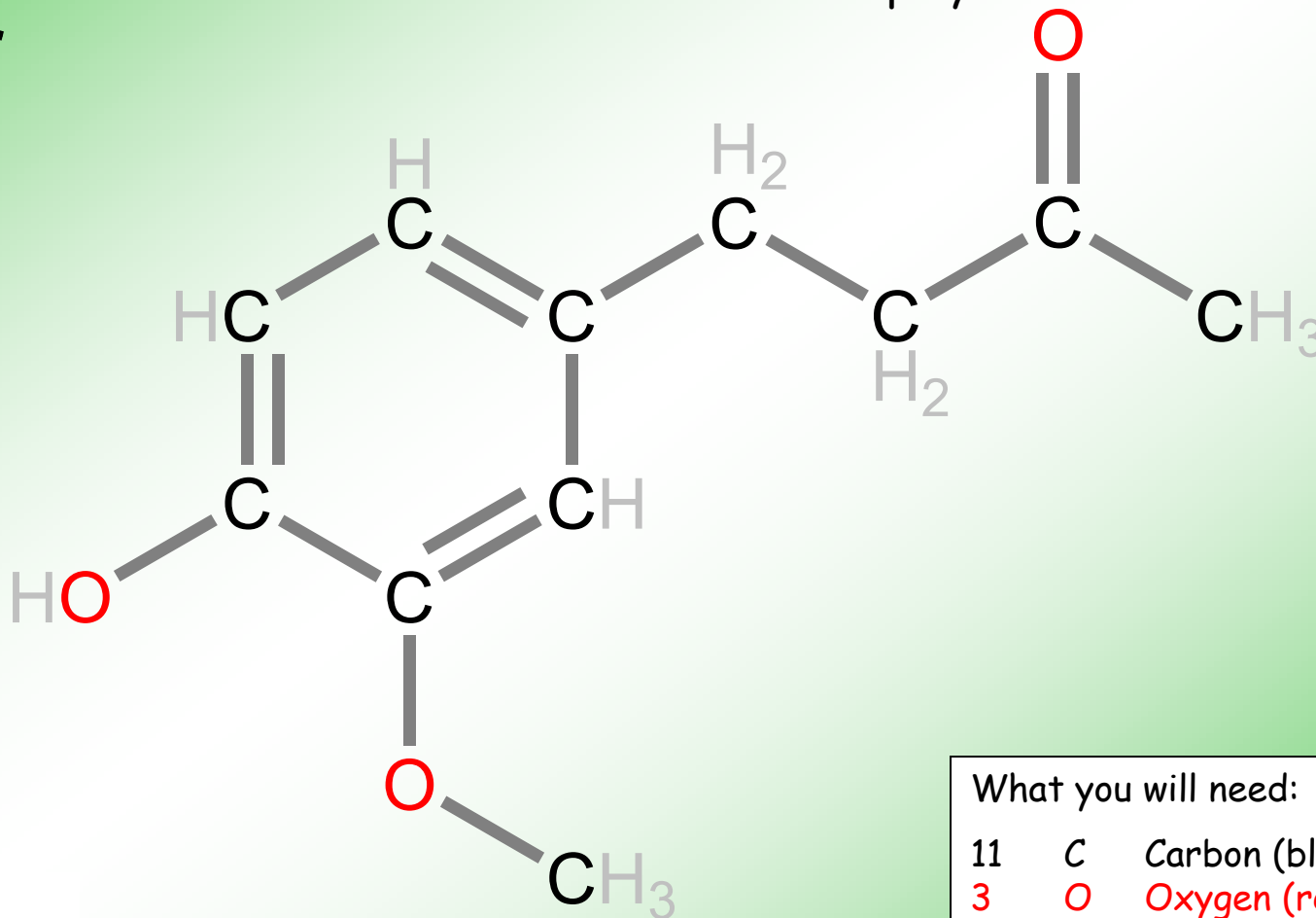
16	C	Carbon (black)
9	O	Oxygen (red)
1	N	Nitrogen (dark blue)
3	N	Nitrogen (light blue)
2	S	Sulphur (yellow, 6 holes)
3	Na	Sodium (grey)
9	H	Hydrogen (white)
23	/	single bonds (straight)
28	f	double bonds (bendy)





# Zingerone

The molecule that gives ginger its spicy hot taste

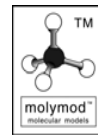


[www.keele.ac.uk/makeitmolecular](http://www.keele.ac.uk/makeitmolecular)

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What you will need:

11	C	Carbon (black)
3	O	Oxygen (red)
14	H	Hydrogen (white)
10	/	single bonds (straight)
8	∩	double bonds (bendy)

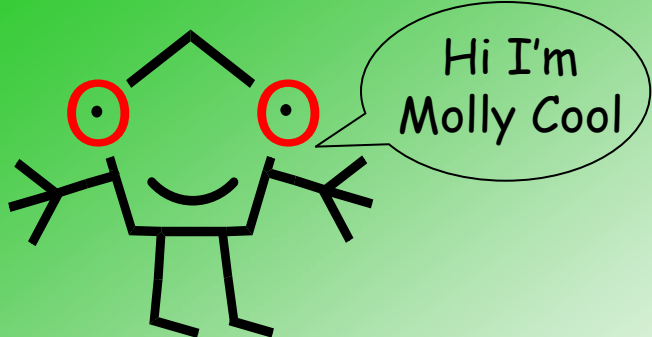


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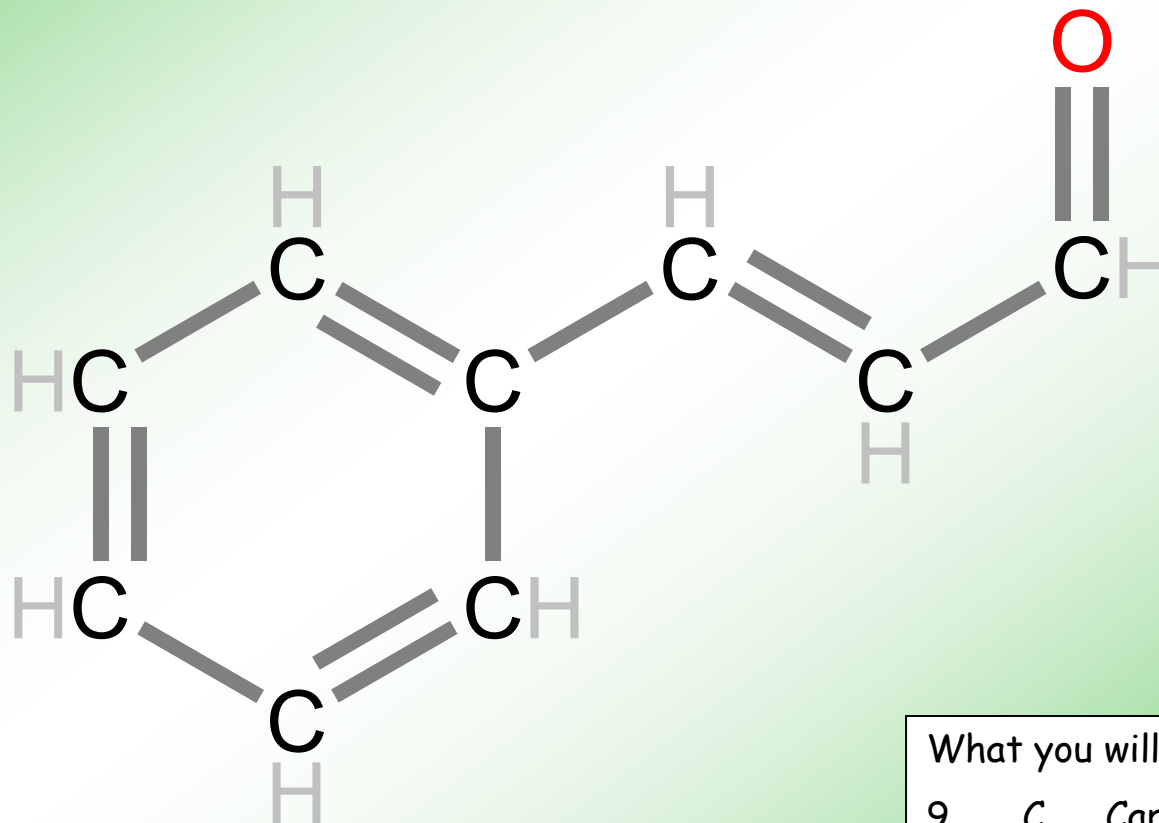
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# Cinnamaldehyde

Found naturally in the bark of cinnamon tree  
this molecule gives cinnamon its taste



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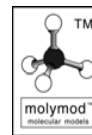
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Research Council

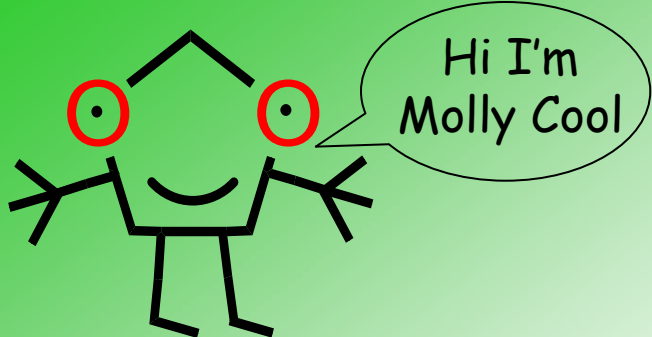
[www.keele.ac.uk/makeitmolecular](http://www.keele.ac.uk/makeitmolecular)

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g.r.jones@keele.ac.uk

What you will need:

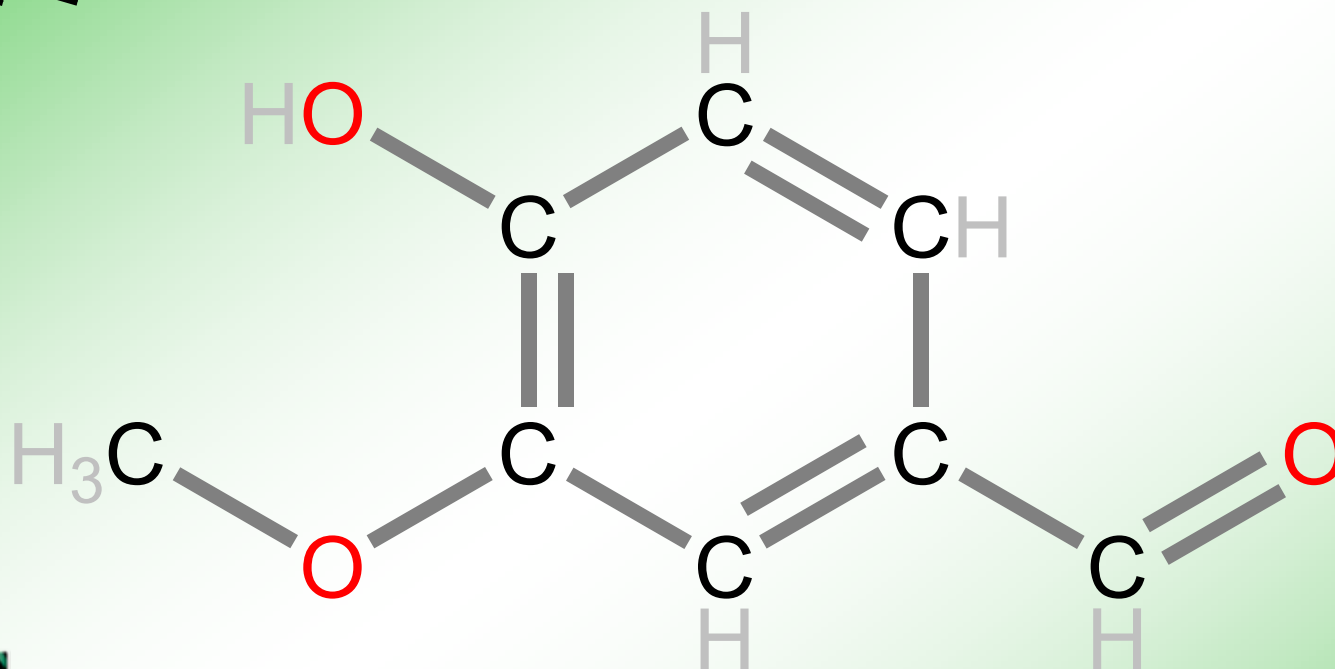
9	C	Carbon (black)
1	O	Oxygen (red)
8	H	Hydrogen (white)
5	/	single bonds (straight)
10	∩	double bonds (bendy)





# Vanillin

The smell of vanilla. Extracted from the vanilla pod and used to flavour ice-cream and other foods



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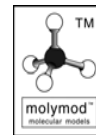
Engineering and Physical Sciences  
Research Council

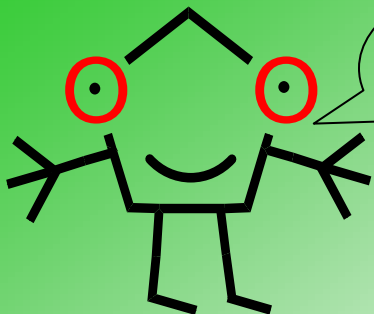
[www.keele.ac.uk/makeitmolecular](http://www.keele.ac.uk/makeitmolecular)

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g.r.jones@keele.ac.uk

What you will need:

8	C	Carbon (black)
3	O	Oxygen (red)
8	H	Hydrogen (white)
7	/	single bonds (straight)
8	∫	double bonds (bendy)

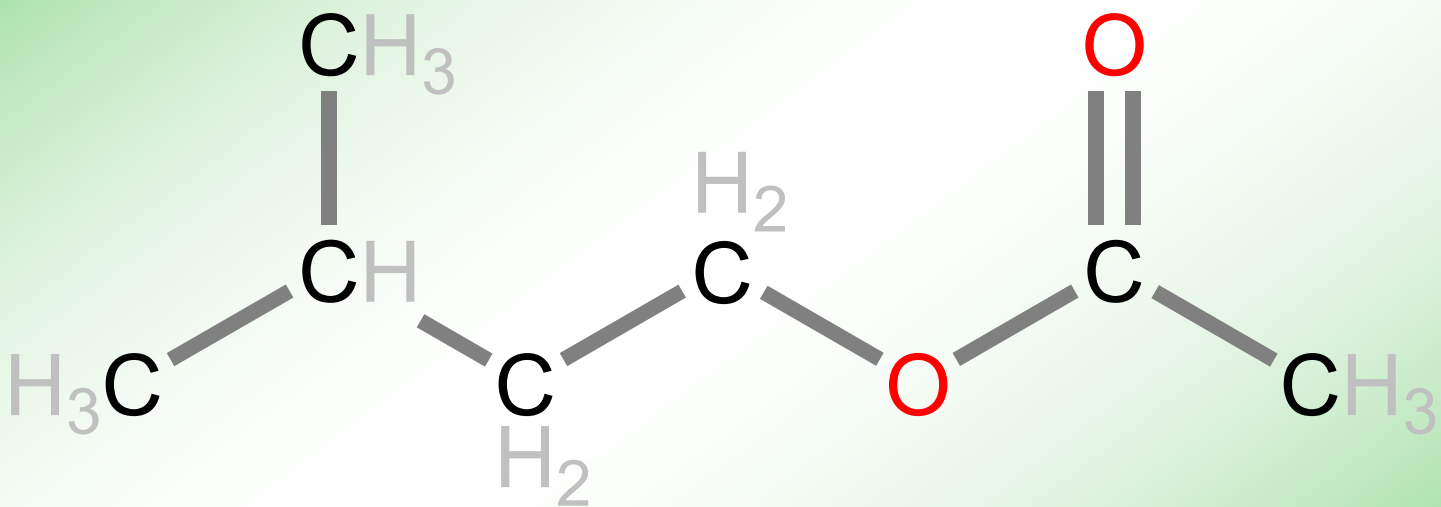




Hi I'm  
Molly Cool

# Isoamyl acetate

This molecule has a fruity taste and is used to flavour sweets such as pear drops



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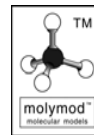
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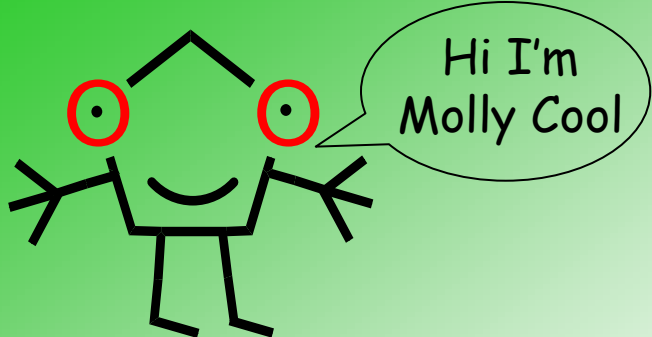
[www.keele.ac.uk/makeitmolecular](http://www.keele.ac.uk/makeitmolecular)

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What you will need:

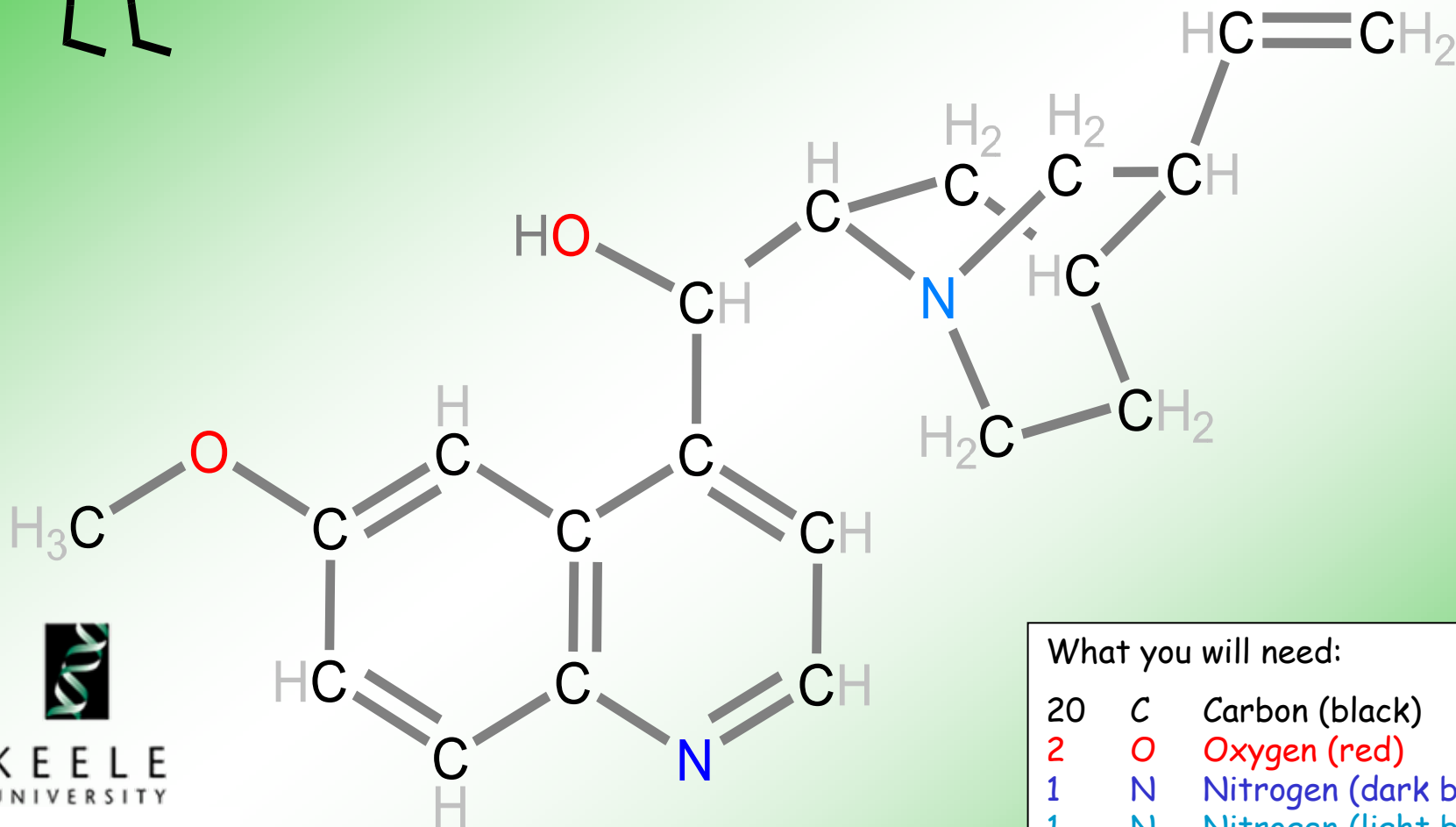
7	C	Carbon (black)
2	O	Oxygen (red)
14	H	Hydrogen (white)
7	/	single bonds (straight)
2	∩	double bonds (bendy)





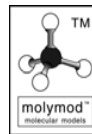
# Quinine

Responsible for the bitter taste of tonic water



What you will need:

20	C	Carbon (black)
2	O	Oxygen (red)
1	N	Nitrogen (dark blue)
1	N	Nitrogen (light blue)
24	H	Hydrogen (white)
21	/	single bonds (straight)
12	f	double bonds (bendy)

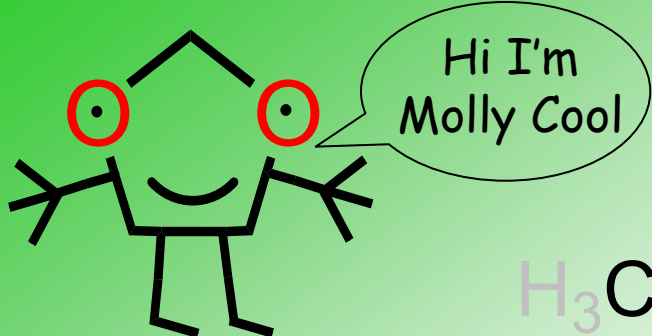


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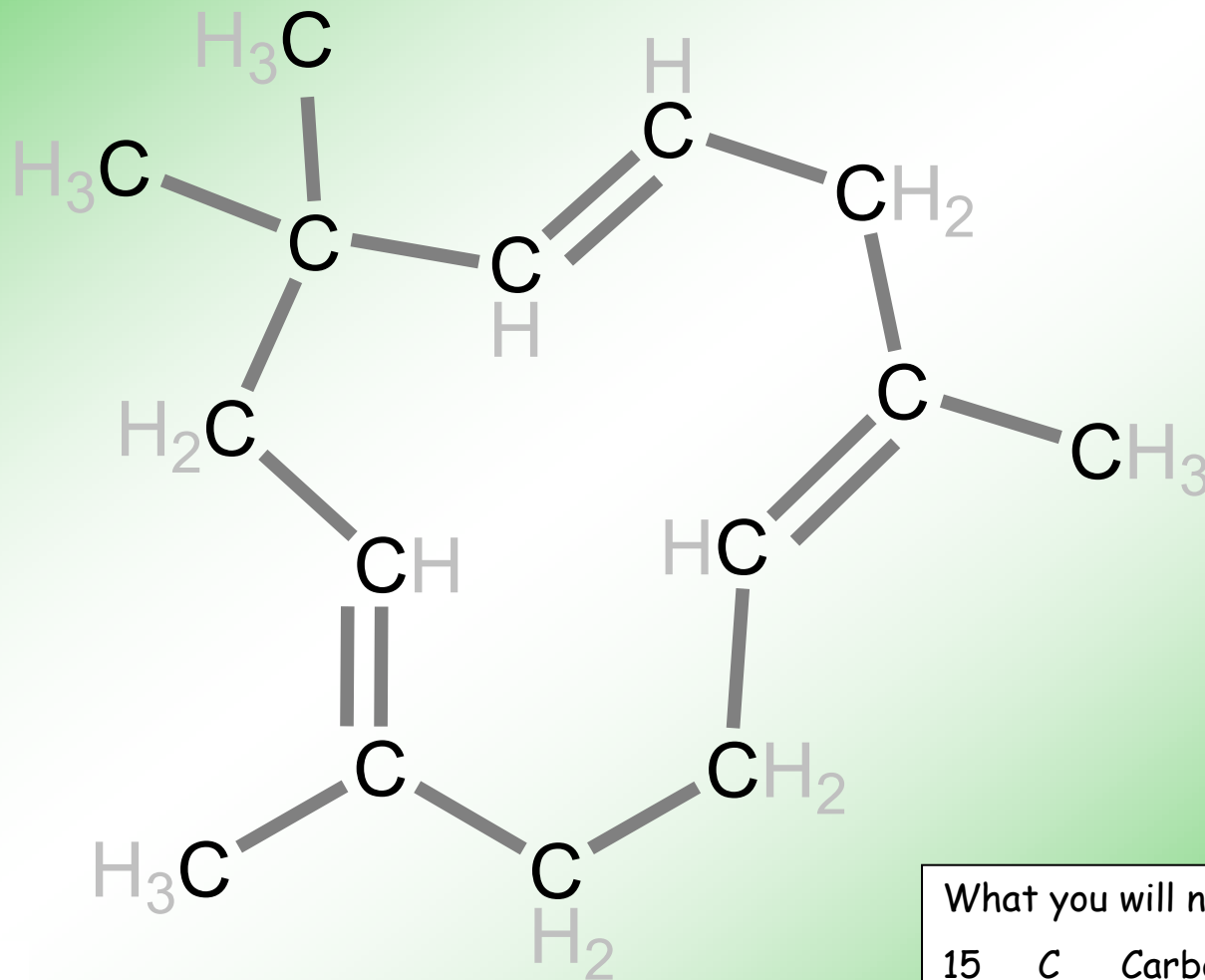
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# Humulene

The essential oil of hops - gives flavour to beer

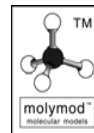


[www.keele.ac.uk/makeitmolecular](http://www.keele.ac.uk/makeitmolecular)

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g.r.jones@keele.ac.uk

What you will need:

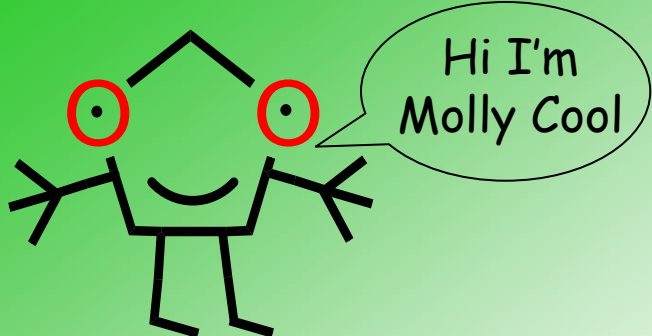
15	C	Carbon (black)
24	H	Hydrogen (white)
12	/	single bonds (straight)
6	∩	double bonds (bendy)



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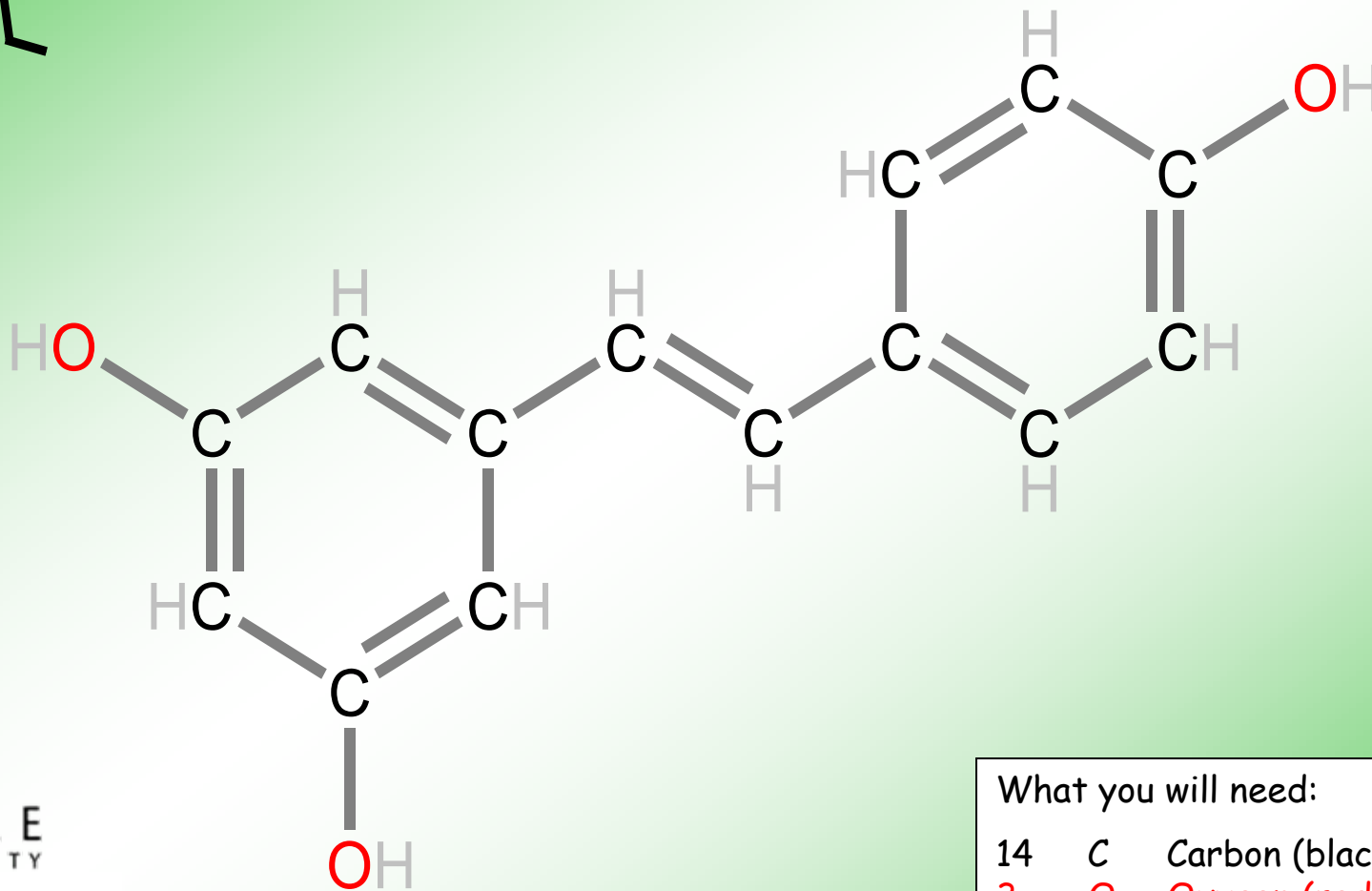
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# Resveratrol

Polyphenolic antioxidant found in red wine



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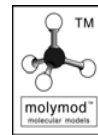
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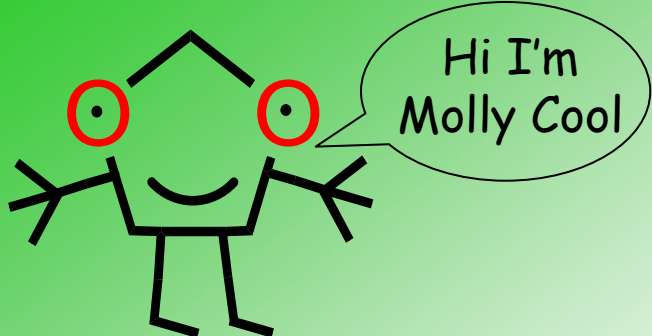
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What you will need:

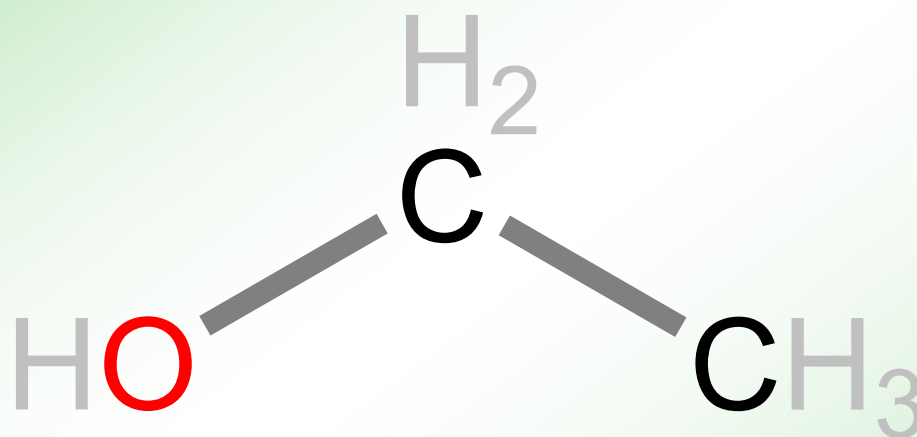
14	C	Carbon (black)
3	O	Oxygen (red)
12	H	Hydrogen (white)
11	/	single bonds (straight)
14	∩	double bonds (bendy)





# Ethanol

The alcohol in "alcoholic" drinks such as beer, wine and spirits



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What you will need:

2	C	Carbon (black)
1	O	Oxygen (red)
6	H	Hydrogen (white)
2	/	single bonds (straight)

