Fluorescent molecules with bioimaging properties

Chan Kai En, Timothy Tay, Yap Ming Sheng (4S3)

11-16

In the body...

At the hospital...















Credibility

Cases of false diagnosis

Safety Issues

Usage of high energy EM Radiation



Fluorescence imaging is the **visualisation** of fluorescent molecules and allows for the study of cellular processes.

Fluorescence Imaging



Fluorescence imaging has yet to be extensively studied

There is potential in developing new molecules to help with the study of fluorescence imaging and diagnosis

In the lab...



In the molecular realm





Impurities





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Filtration



Recrystallisation









Fluorescence Test







Spectrofluorophotometer





In the body...

At the hospital...





Thank you!



References

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QnA

Any questions?

Chemical reactions: General equation

 $2 \operatorname{Ru}_{3}(CO)_{12} + 6 \operatorname{RCO}_{2}H + 6 L ->$



 $\frac{1}{12} + 12 \text{ CO} + 3 \text{ H}_2$



Compound 1a





7-hydroxy-3-carboxycoumarin

Pyridine

Compound 1b





7-hydroxy-3-carboxycoumarin

Triphenylphosphine (PPh_3)

Compound 2a





3-carboxycoumarin

Pyridine

Compound 2b





3-carboxycoumarin

Triphenylphosphine (PPh₃₎



Compound 1a Fluorescence Spectra



Compound 1b Fluorescence Spectra



Compound 2a Fluorescence Spectra



