

Case Study: Re-plasticisation of Film and Magnetic Tape

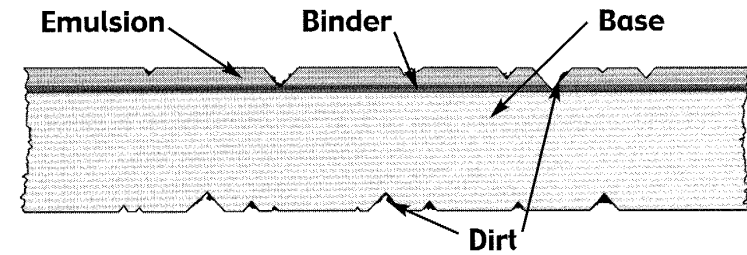
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Akademie der bildenden Künste

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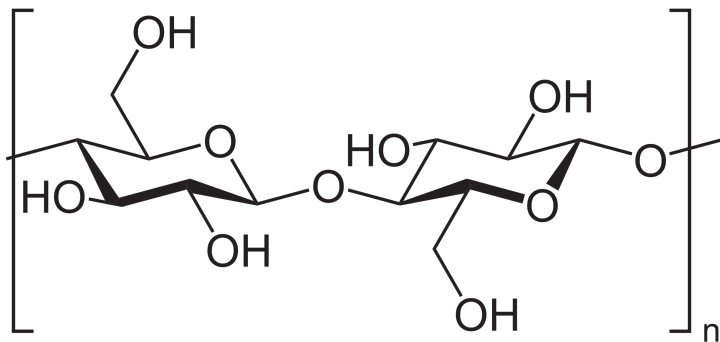
1

Cross Section



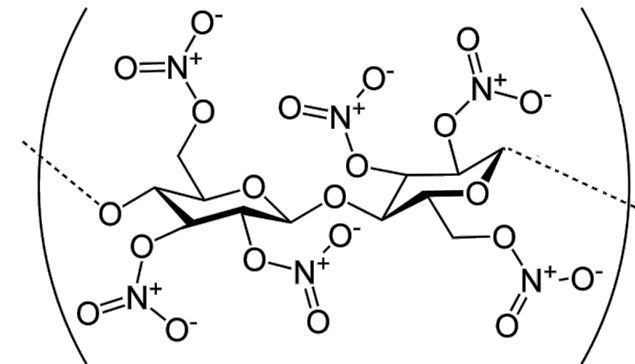
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Cellulose



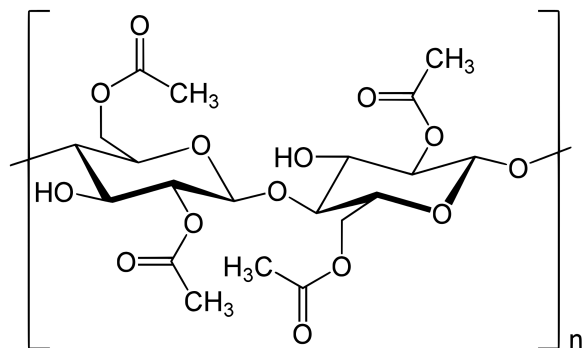
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Nitrocellulose



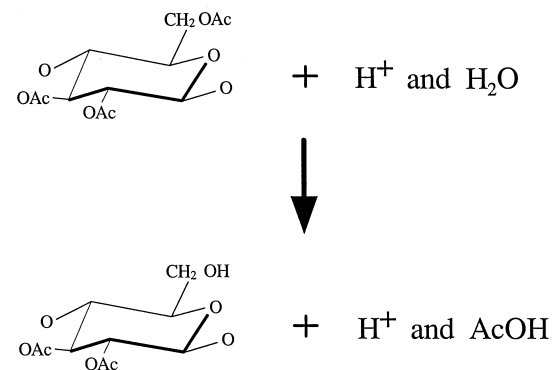
4

Cellulose Acetate



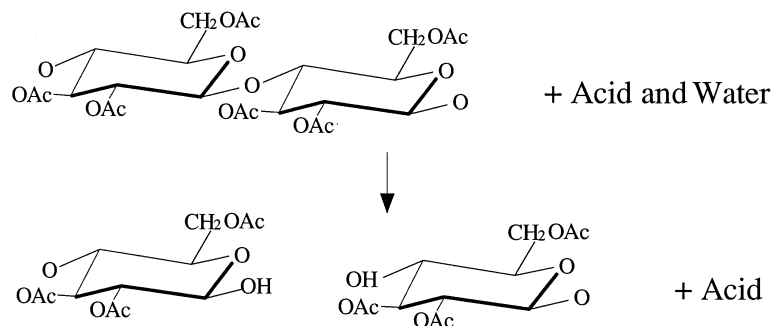
5

Acid Catalysed Hydrolysis



6

Glycosidic Cleavage by Hydrolysis



7

Bibliography

Paul Read and Mark-Paul Meyer:
Restoration of Motion Picture Film.
Butterworth-Heinemann, Oxford 2000

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**Always refrain from
using chemical
substances if you
don't know exactly
what you are
doing!**

9

Recipe 1

- water
- less than 0.5% of formaldehyde

10

Recipe 2

- 3 parts of water
- 1 part of glycerol
- 1 part of acetone supplemented with camphor respectively with methyl phthalate

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Recipe 3

- camphor dissolved in isopropyl alcohol until saturation

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14



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