

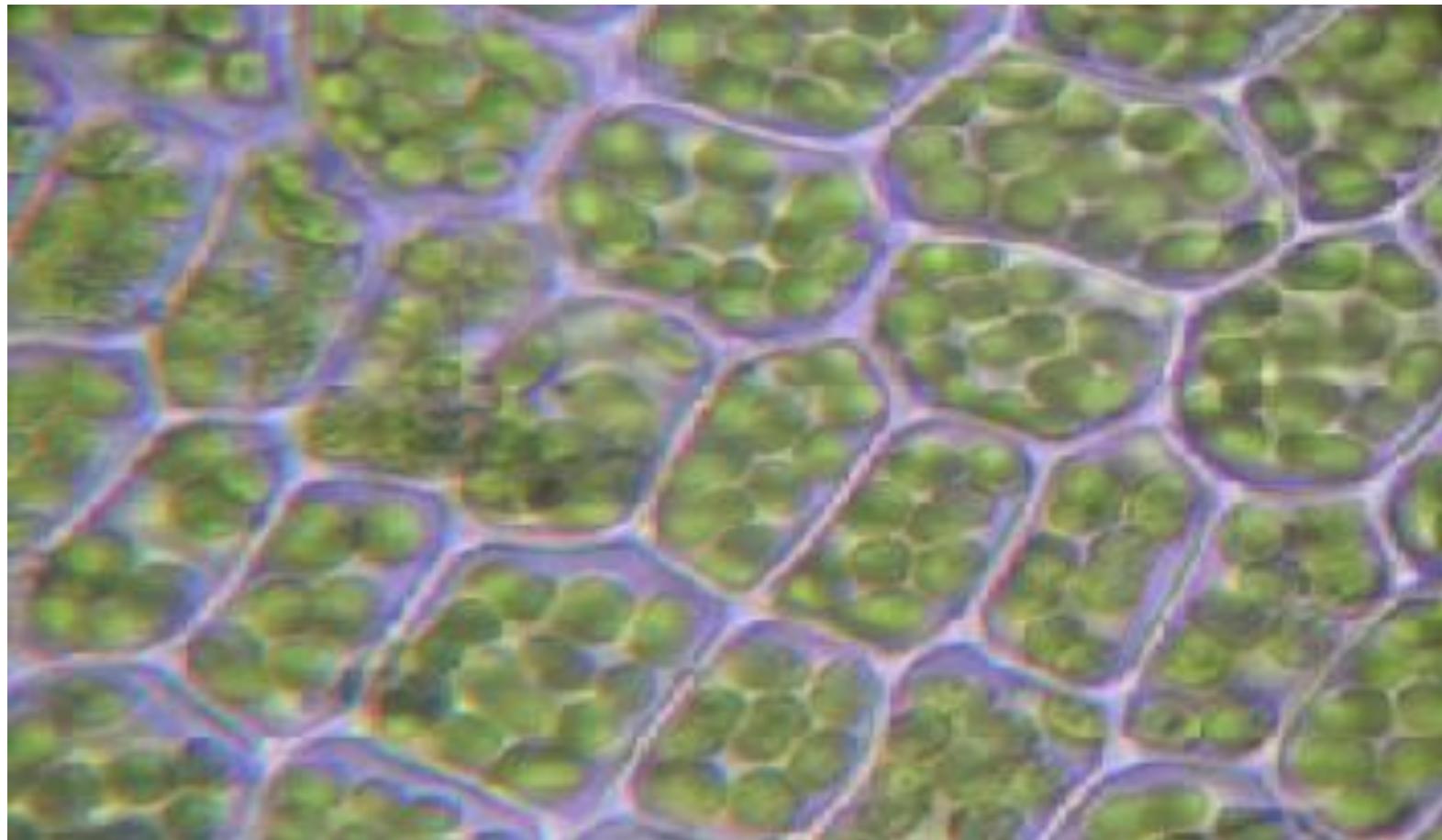
# Hyldehuset

## Honning og fyldt chokolade

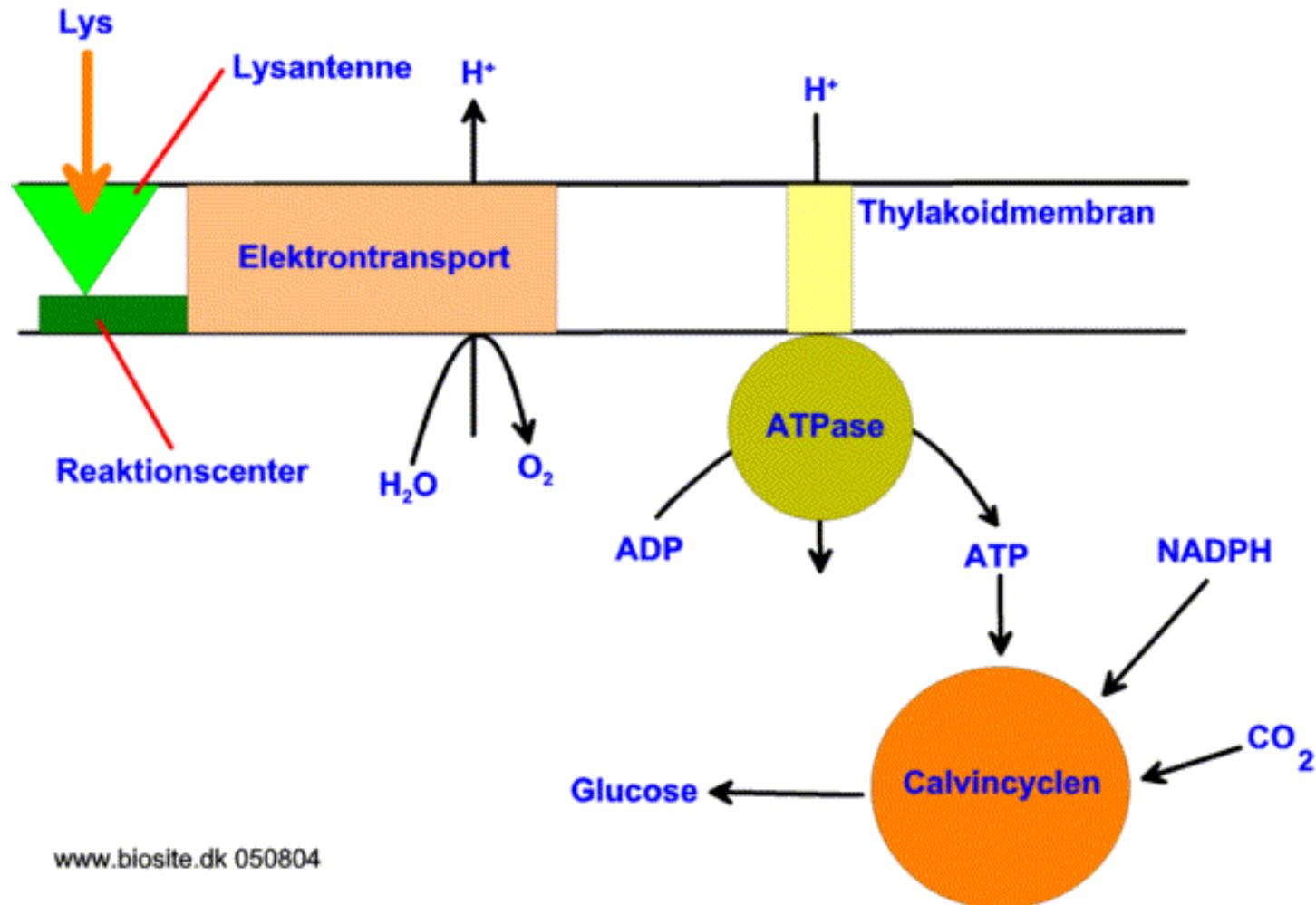
# Blad



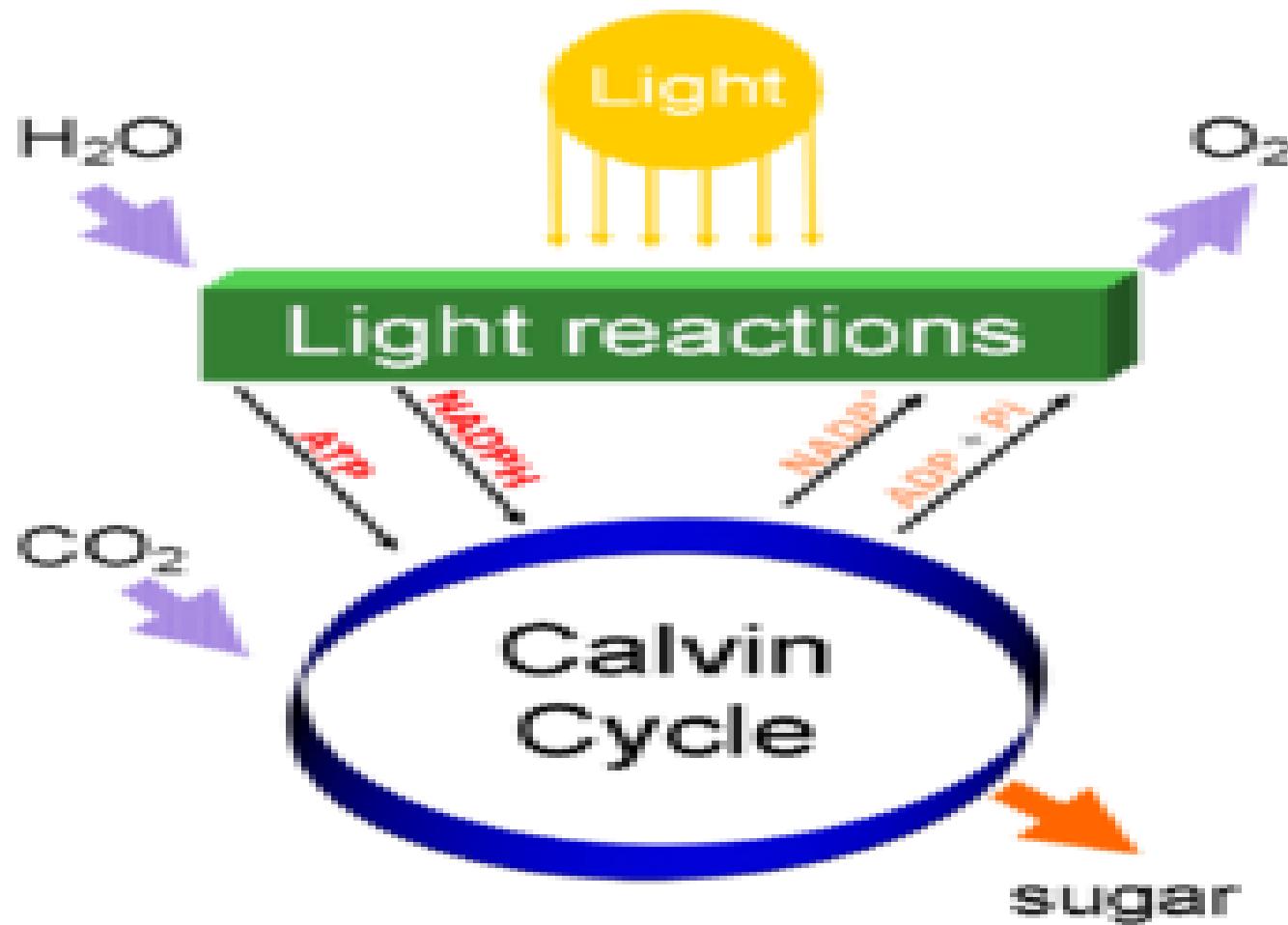
# Bladoverflade



## Fotosyntesen - skematisk oversigt



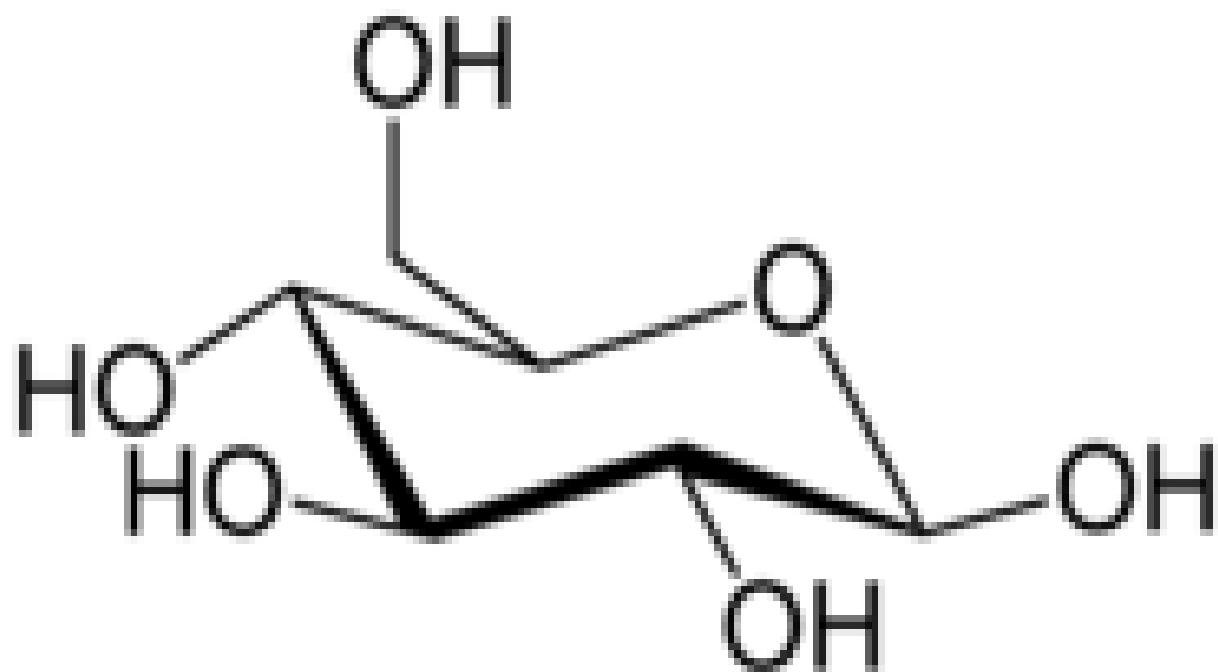
# Photosynthese



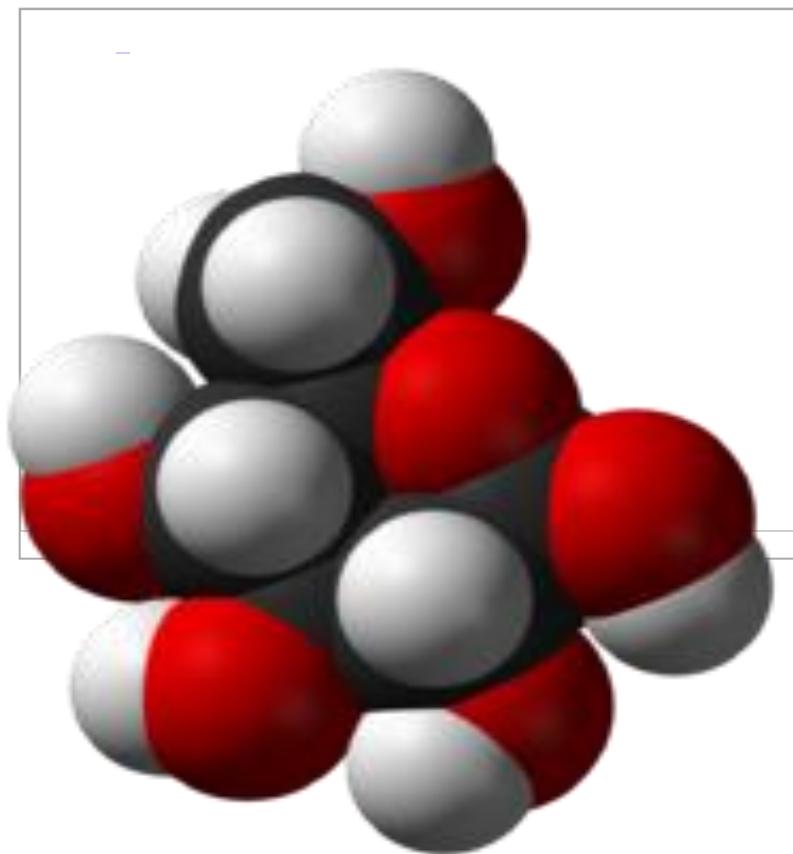
# Bladnektarier



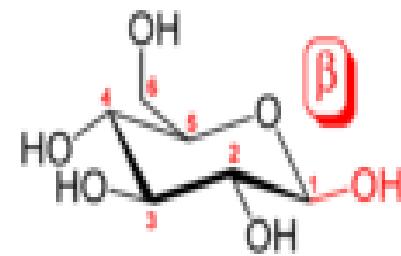
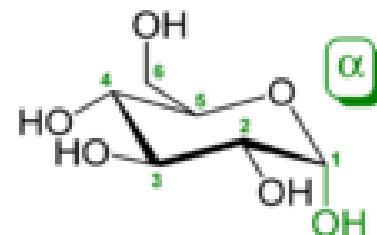
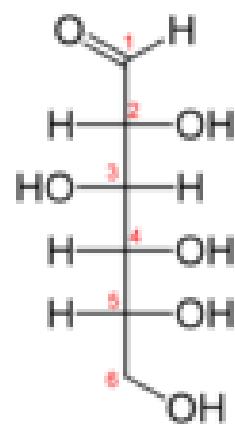
# Glucose



# Glucose kuglemodel



# Modeller



# Glucose polymerer

Glucose

Glycogen

Disaccarid

Fedt

Polysaccarid

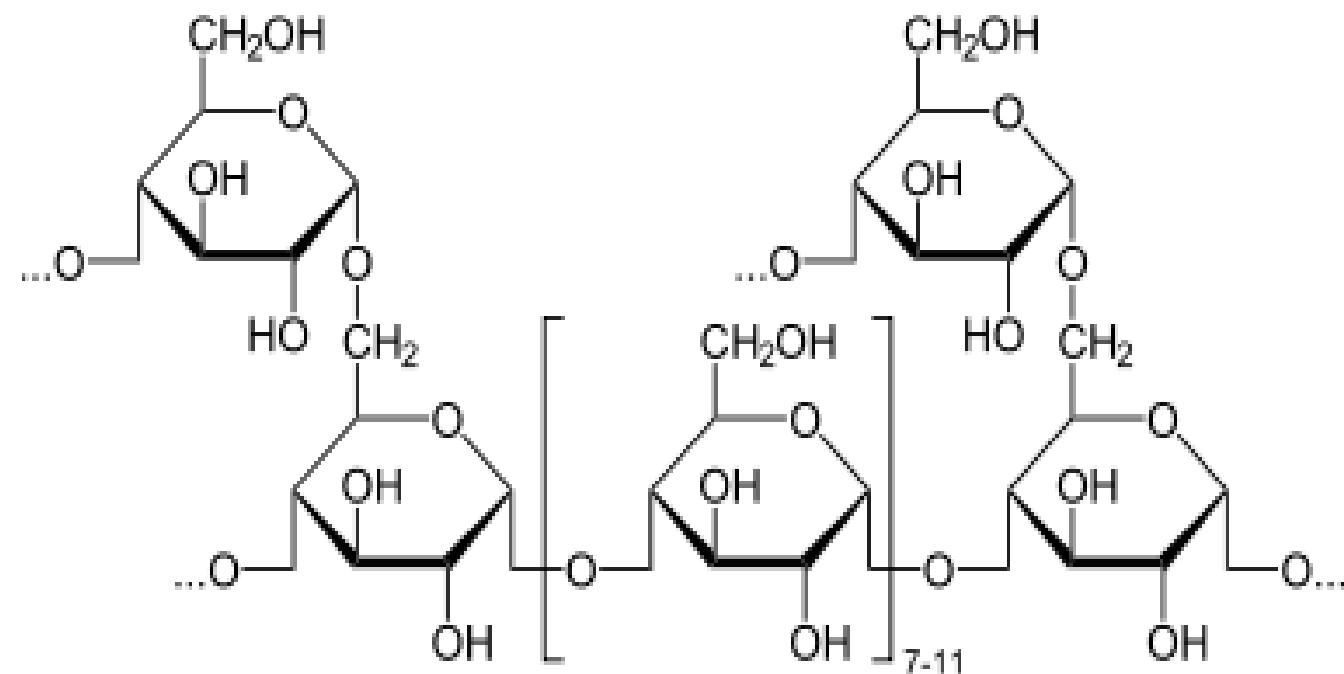
Aminosyre

Stivelse

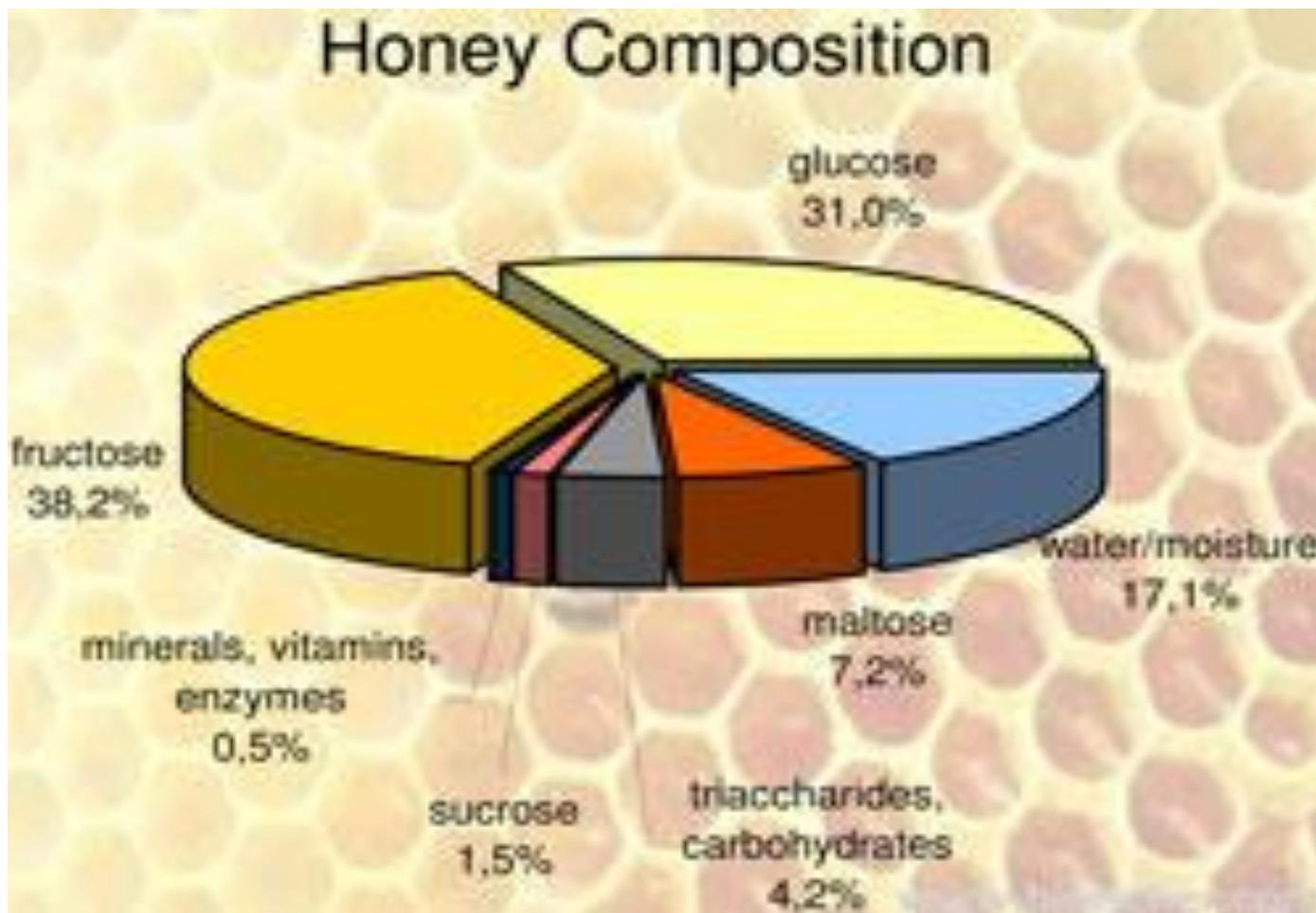
Protein

Cellulose

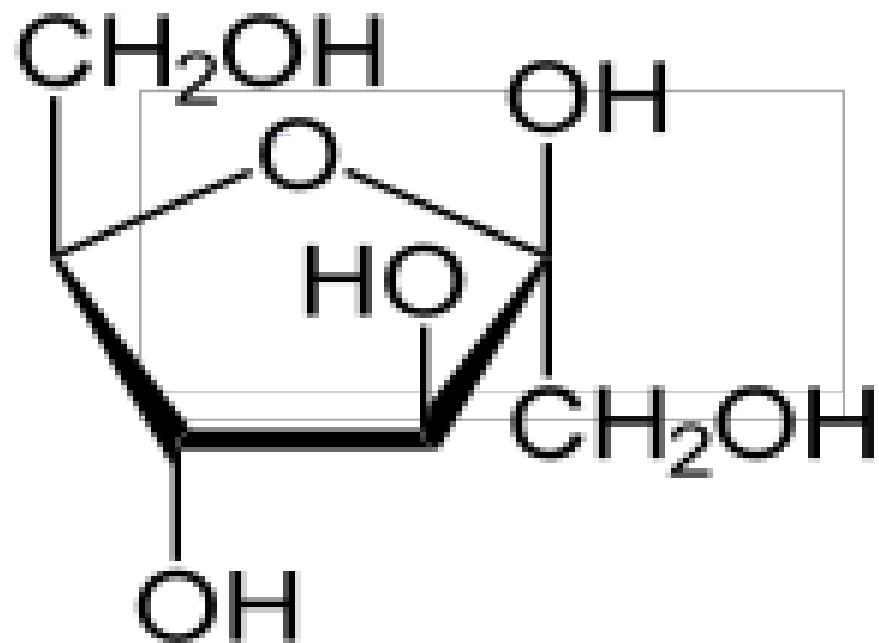
# Glycogen



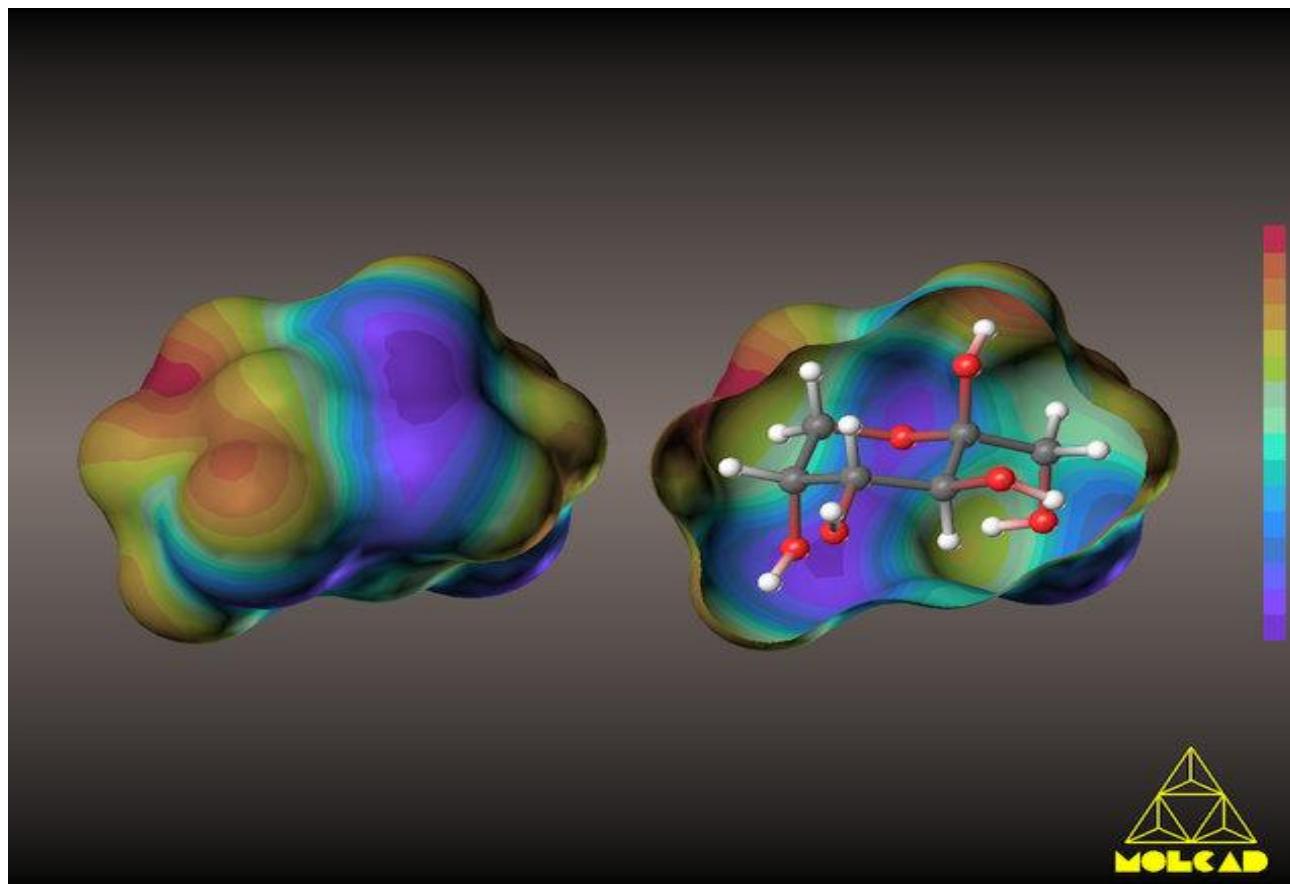
# Honningens bestanddele



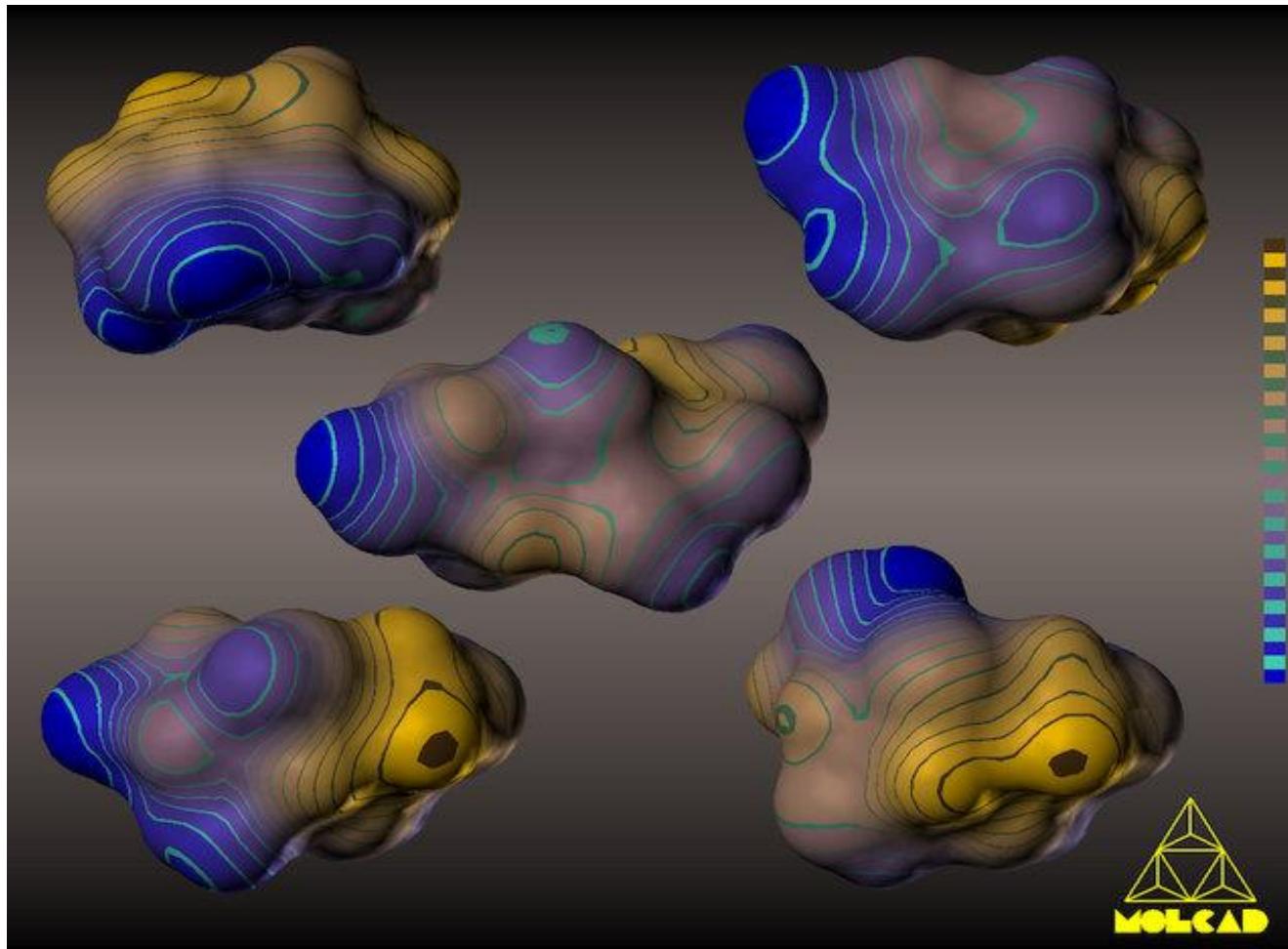
# Fructose



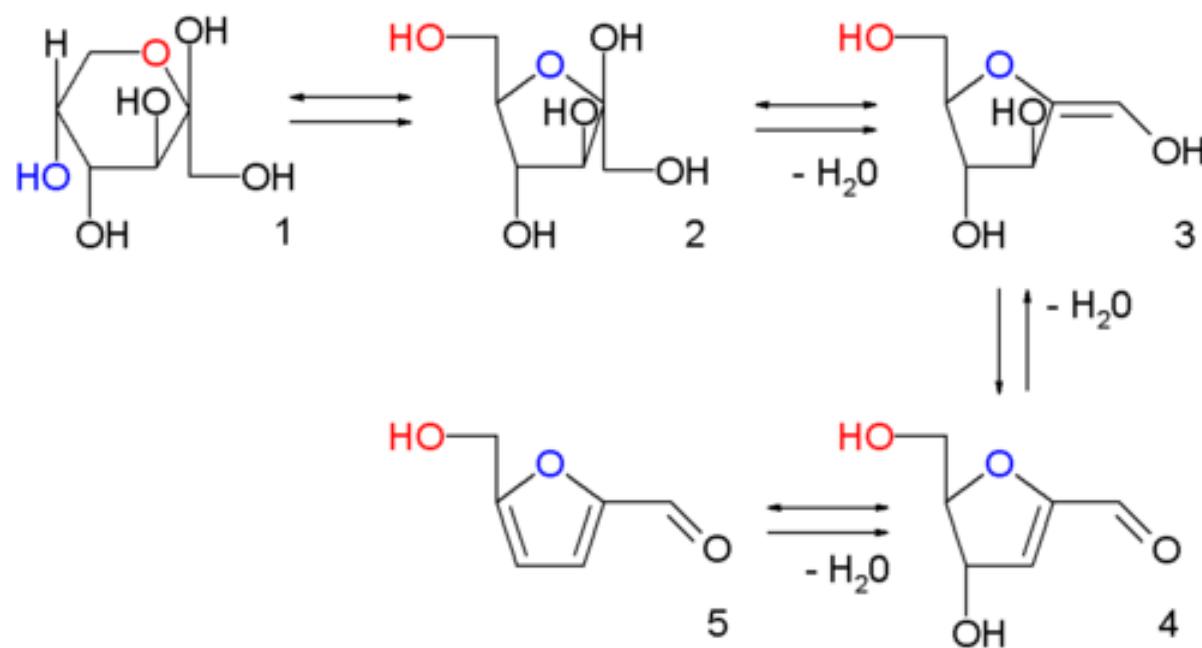
# Fructosemodel



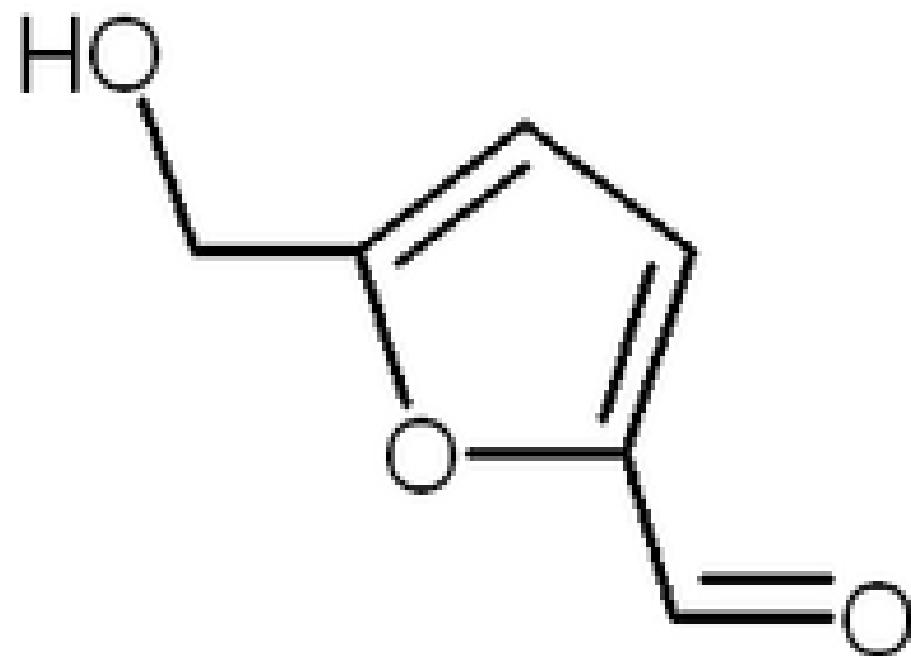
# 5 fructoser



# HMF



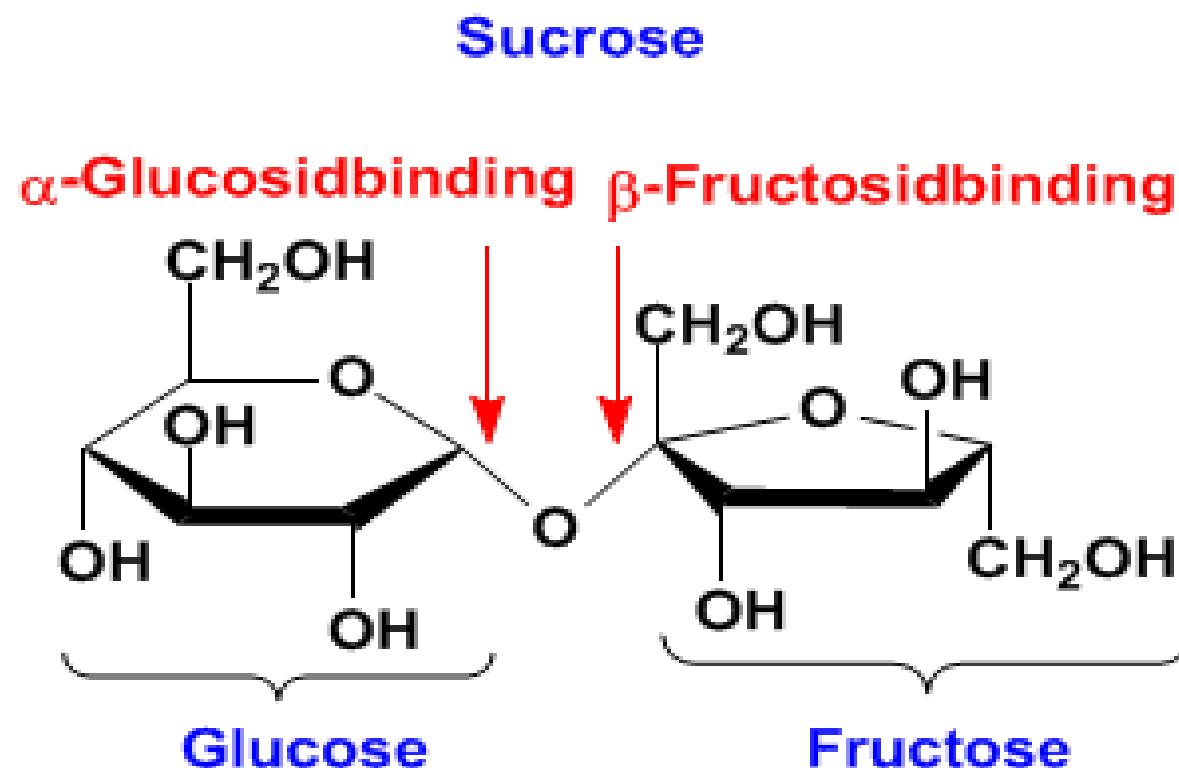
# Hydroxymethylfufural



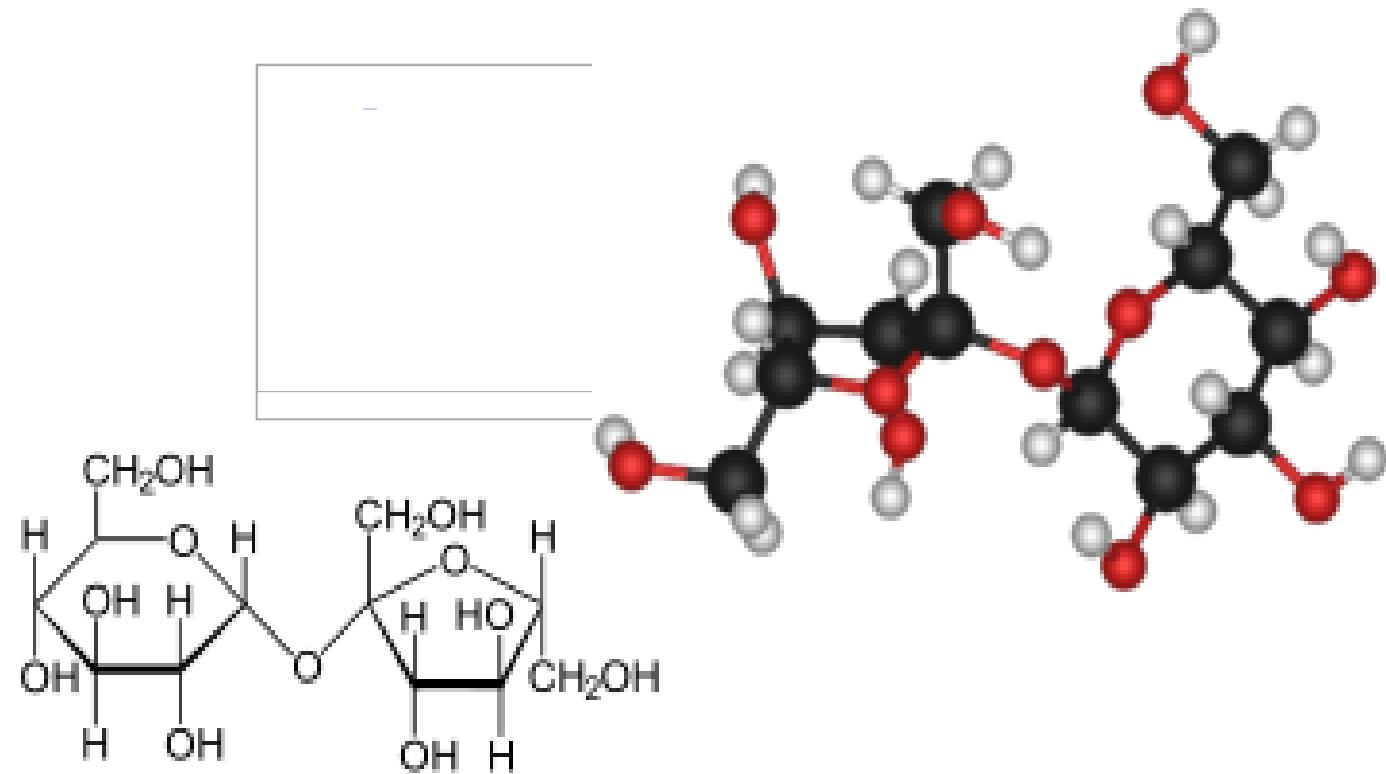
## Tabel 2

Sukkertype	Relativ sødme
Sucrose	1.0
Fruktose	1.7 / 1.1
Glukose	0.6
Sorbitol	0.6

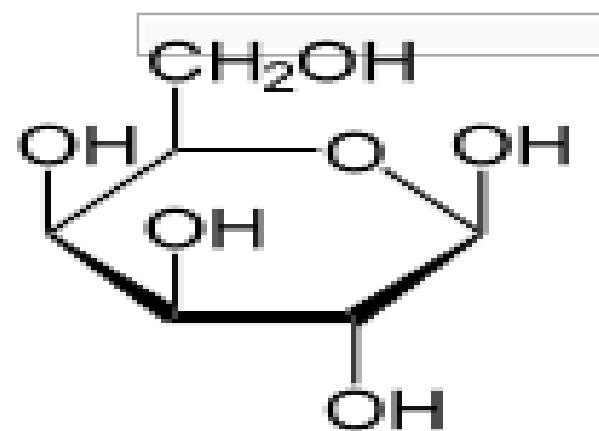
# Sucrose



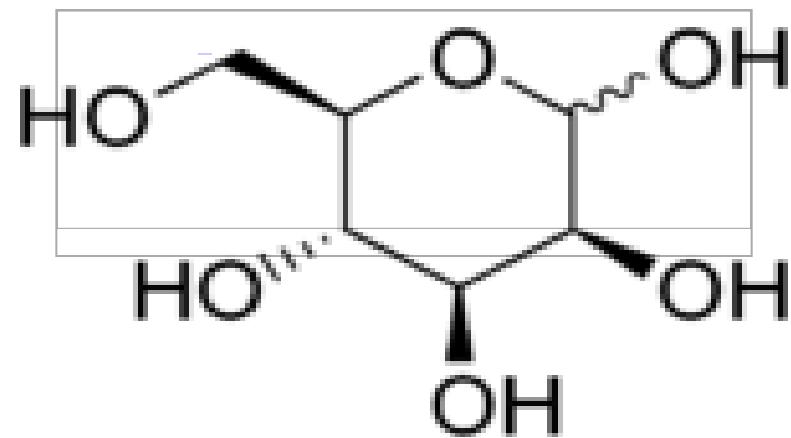
# Sucrose



# Galactose



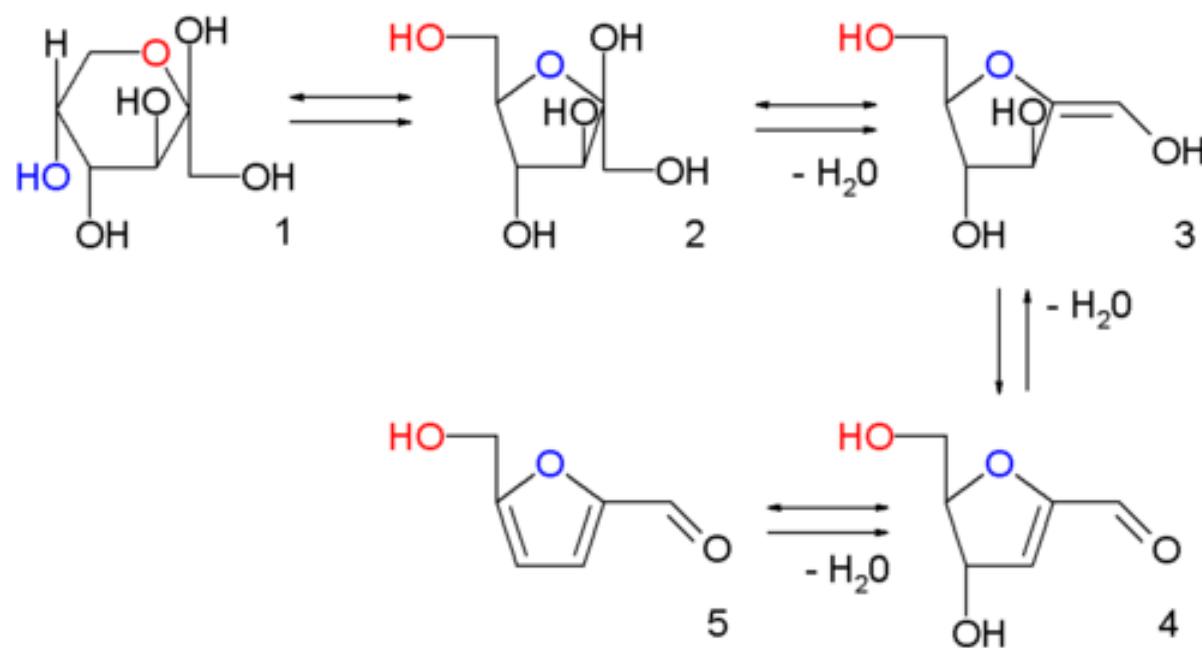
# Mannose







# HMF



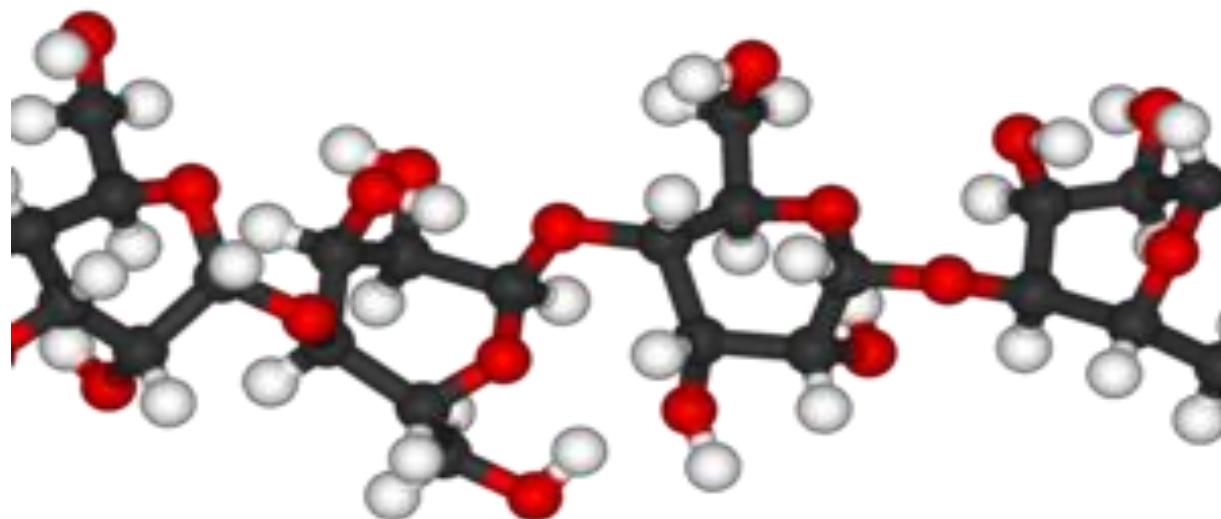
# Disaccarider

- Maltose      2 x glucose
- Cellobiose    2 x glucose
- Lactose       glucose + galactose
- Sucrose       glucose + fructose

# Polysaccarid

- Melezitose
  - 1 x fructose
  - 2 x glucose
- Pektin
- Agar
- Garrogenan

# Cellulose



# Invertering

- Sucrose +66,5 grader

Med tilsetning af vand og syre eller enzymer

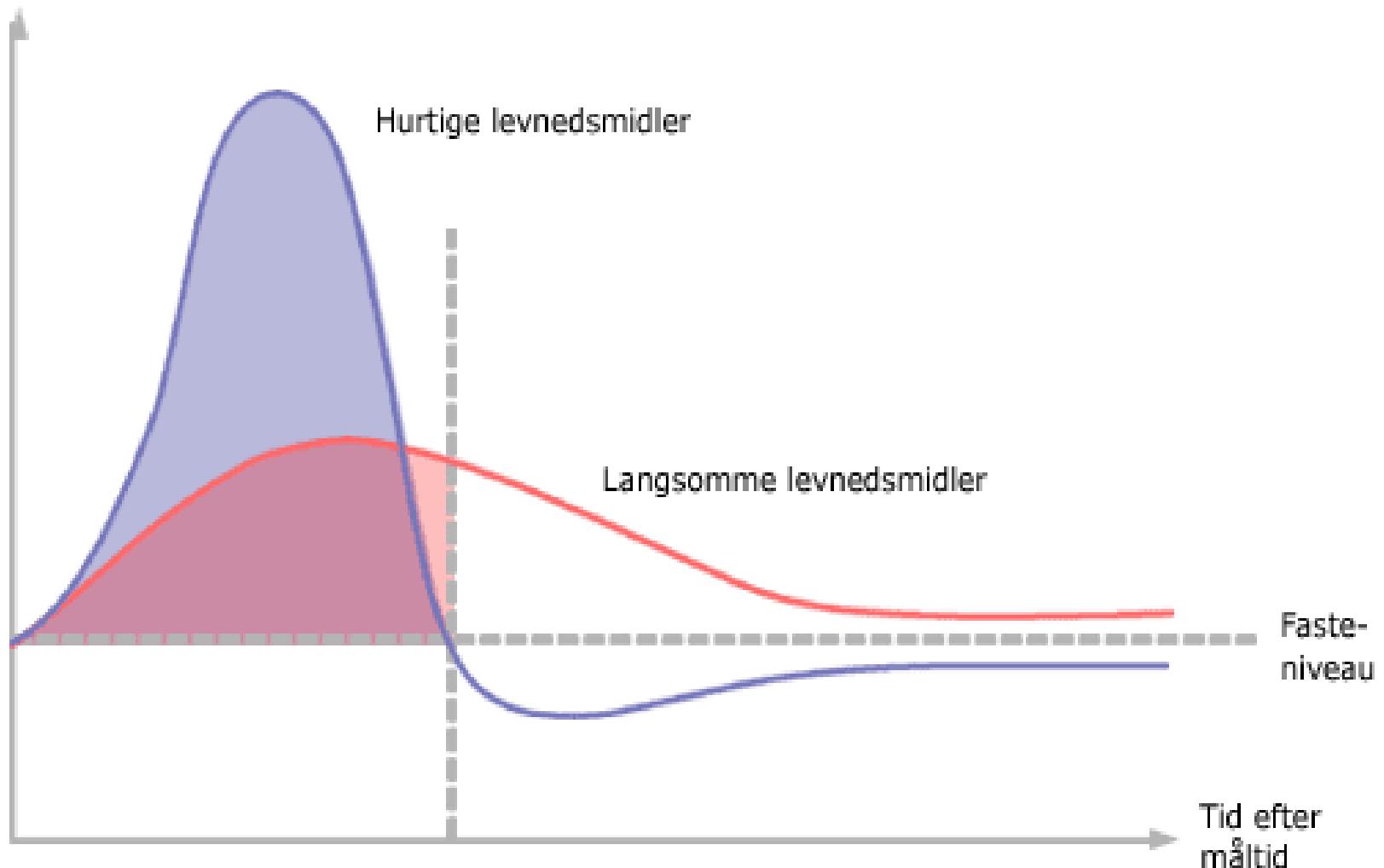
- + glucose + 52,7 grader

- fructose - 92,4 grader

- Dextrose – højredrejende
- Levulose - venstredrejende

# Glykæmisk Indeks (GI)

Blodsukker-  
koncentration



Blodglukosekurve efter hhv. långsomme og hurtige levnedsmidler

# Tabel 1

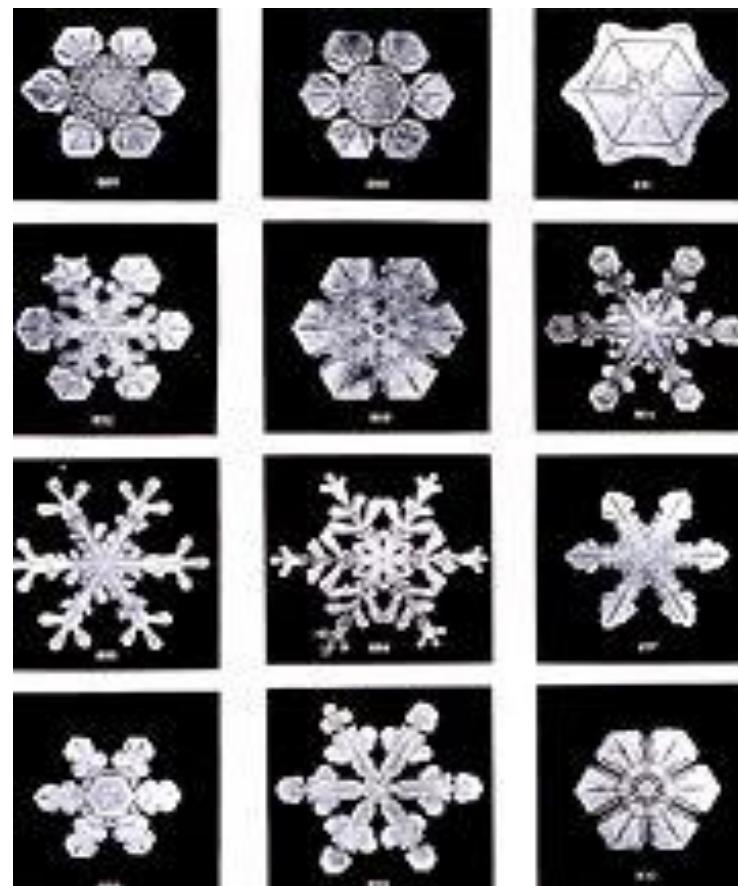
Type/indhold	Glukose	Fruktose	Maltose	Sucrose	GI
Comm 1 (AUS)	20.3	27.5	1.5	1.1	67
Comm 2 (AUS)	29.6	38.1	1.6	0.9	62
Iron Bark (AUS)	23.6	33.8	1.4	1.1	48
Red Gum (AUS)	32.9	34.6	3.7	2.5	46
Salvation Jane (AUS)	27.7	31.9	1.1	0.9	64
Stringy Bark (AUS)	27.9	52.4	1.0	1.0	44
Yapanya (AUS)	23.9	42.1	0.9	0.8	52
Yellow Box (AUS)	26.8	45.5	1.1	0.8	35
Raps (DK)	47.0	43.0	8.5	0.1	ca. 60
Hvidkløver (DK)	43.0	47.4	6.9	1.0	ca. 60
Lynghonning (DK)	38.3	54.2	6.2	0.2	ca. 50
Skovhonning (DK)	36.8	43.7	12.7	0.1	ca. 55
Roe/rørsukker				100	61
Maltose			100		≈ 100
Fruktose		100			23
Glukose	100	-	-	-	100
Linser					29
Gulerødder					47
Cornflakes					81
Kogte kartofler					85

LAV GI (under 55)		MELLEM GI (56-69)		HØJ GI (over 70)	
Fisk	0	Majs	55	Franskbrød	70
Kød	0	Brune ris	55	Kogte kartofler	70
Olie	0	Jordbær	56	Sweet potato	70
Skaldyr	0	Müsli	56	Bagle	72
Smør	0	Grape	59	Spaghetti	72
Stevia	0	Is	61	Vandmelon	72
Sukrin	0	Risnudler	61	Popcorn	72
Birkesød	7	Cola	63	Sukker	73
Peanuts	14	Rosiner	64	Chips	73
Sojabønner	15	Knækbrød	64	Vafler	76
Tomat	21	Couscous	65	Coco pops	77
Kirsebær	22	Ananas	66	Corn flakes	80
Mørk chokolade	25	Gulerod	66	Pizza	80
Sød mælk	27	Croissant	67	Vilde ris	81
Kikærter	28	Rørsukker	68	Riskiks	81
Umoden banan	30	Moden banan	69	Ris	83
Skummet mælk	30			Kartoffelmos	85
Yoghurt	36			Baguette	95
Æble	38			Taco skaller	97
Fuldkornspasta	40			Bagt kartoffel	98
Appelsin	44			Tørrede dadler	103
Havregrynskål	49				
Rugbrød	53				

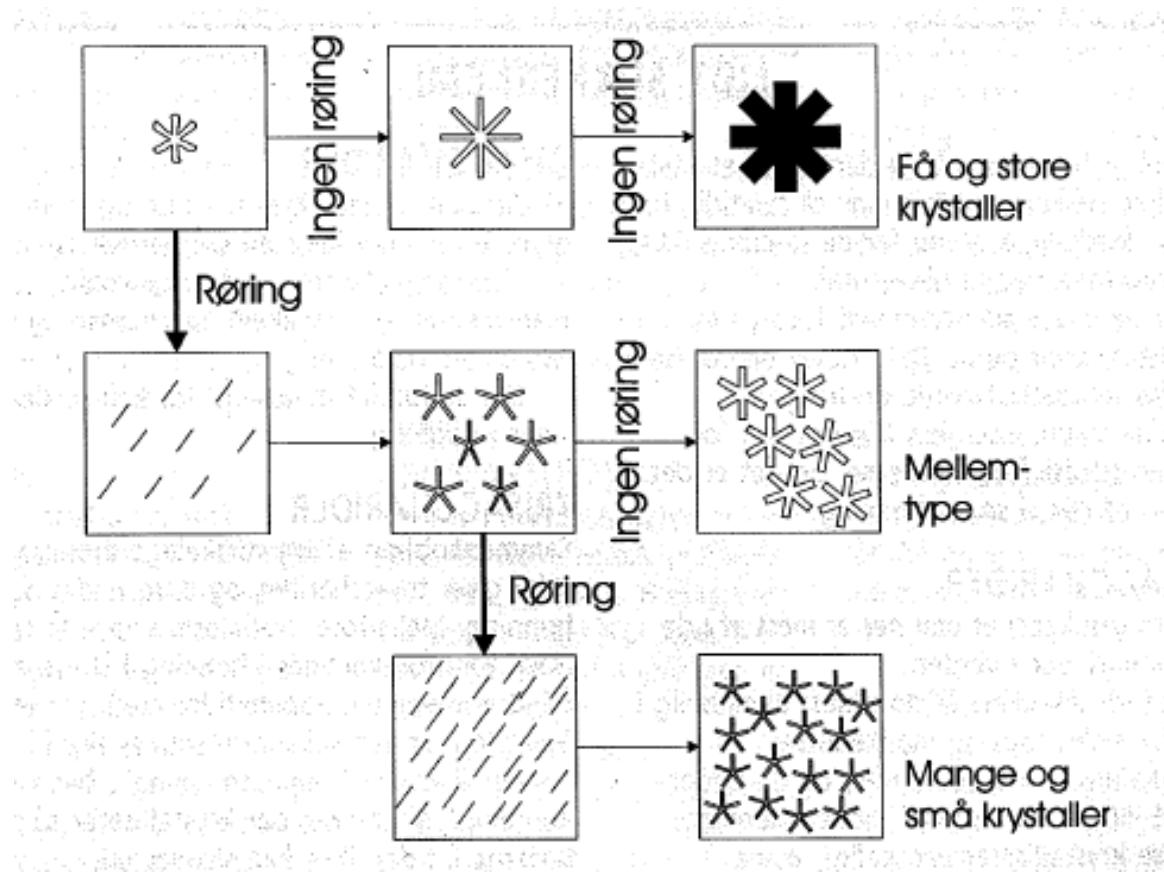
# Krystallisation



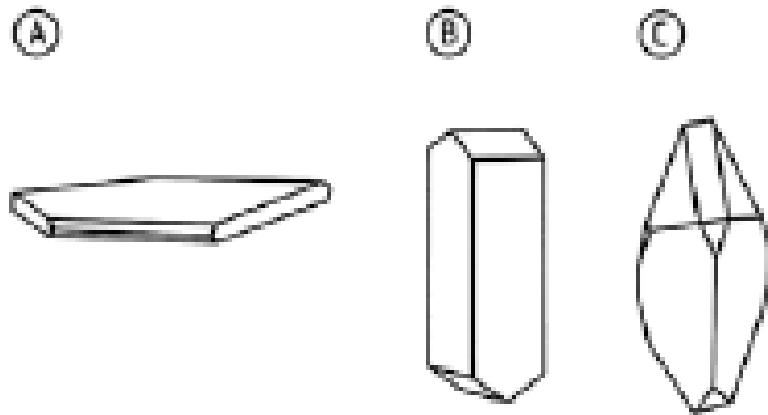
# Snekrystaller



# Krystalstruktur



# Glucosens krystalformer



A)  $\alpha$  – Monohydrate; B)  $\alpha$  – Anhydrous; C)  $\beta$  – Anhydrous

Figure 2.1 Crystal forms of glucose (Ullmann, 2003)

# Kgl Porcelæn







# Honninghøst

Slyngning

Sining

Røring

(podning)

Tapning

# Honningtyper 1

## Fejlbehæftede honning

**For hård**      Lavt vandindhold  
                  Rørt i for kort tid  
                  Højt druesukker indhold

**For blød**      Højt vandindhold  
                  Opvarmet  
                  Overrørt



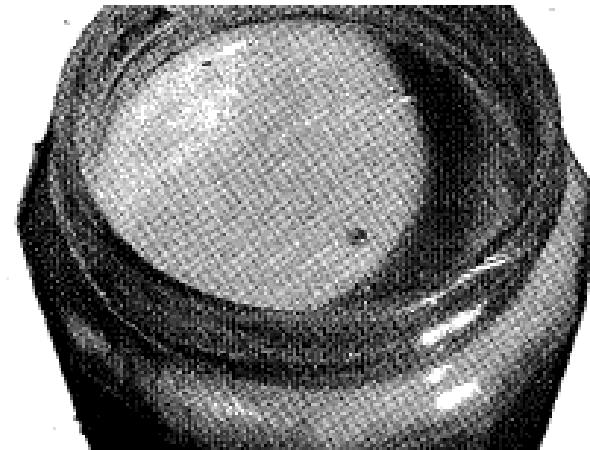
# Honningtyper 2

**Grynet**

Rørt for lidt  
Tappet for tidligt

**Luftbobler**

Tappet for sent  
Rørt for sent



# Honningtyper 3

**Lagdelt**

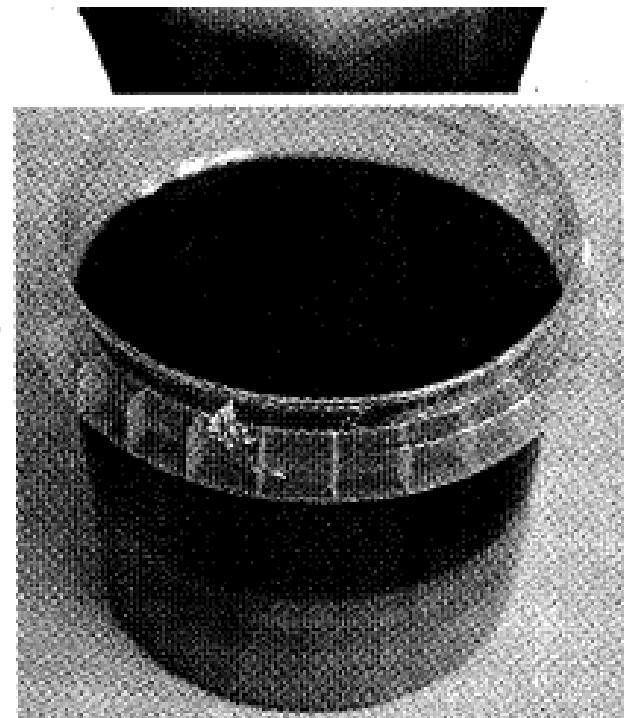
Lagret for varmt  
For højt vandindhold

**Frost**

Lavt vandindhold  
Højt druesukkerindhold  
Rørt for kraftigt

**Gærret**

For højt vandindhold  
Opbevaret for varmt



# Tavlehoning



# Flydende honning



# Flydende honning



# Mælkebøttehonning

*Hendes Majestæt Dronningen har bedt mig  
takke for den dejlige honning, som det glædede  
Regentparret at modtage på Marselisborg.*

*Med venlig hilsen,*

*Ane Vibeleke Foss  
Hofdame*



AMALIENBORG, den 6. juli 2009  
H.A. Nr. 466/09-0040

Biabler Nicolaj Wium  
Hyldehuset  
Toftemosevej 41  
3100 Hornbæk

Hendes Majestæt Dronningen har bedt mig takke for den lækre  
mælkebøttehonning, som Dronningen satte stor pris på at modtage.

Med venlig hilsen

A handwritten signature in black ink, appearing to read "Astrid Ruge".  
Astrid Ruge  
Sekretariatschef

# Salg – Jura



# Salg Jura 2



# Salg Jura 3



# Maison du Miel



# Galleri Lafayette



5,95

360G CONF.ORANGE SANGUINE LG



25,91

32

3565030006219

L R 06 UR = 1



# Mjød



# Salg og marketing

- Tilgængelighed
  - Samme sted
  - Altid
  - Stort udvalg
  - Købsoplevelse
  - Min honningleverandør
  - Min biavler

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Pizza  
Burger  
Grill  
Kylling

MENU  
 HAMBURGER  
 MENU 49,-  
 KEBAB  
 MENU 44,-



FYLDT  
CHOKOLADE



# Rhododendron



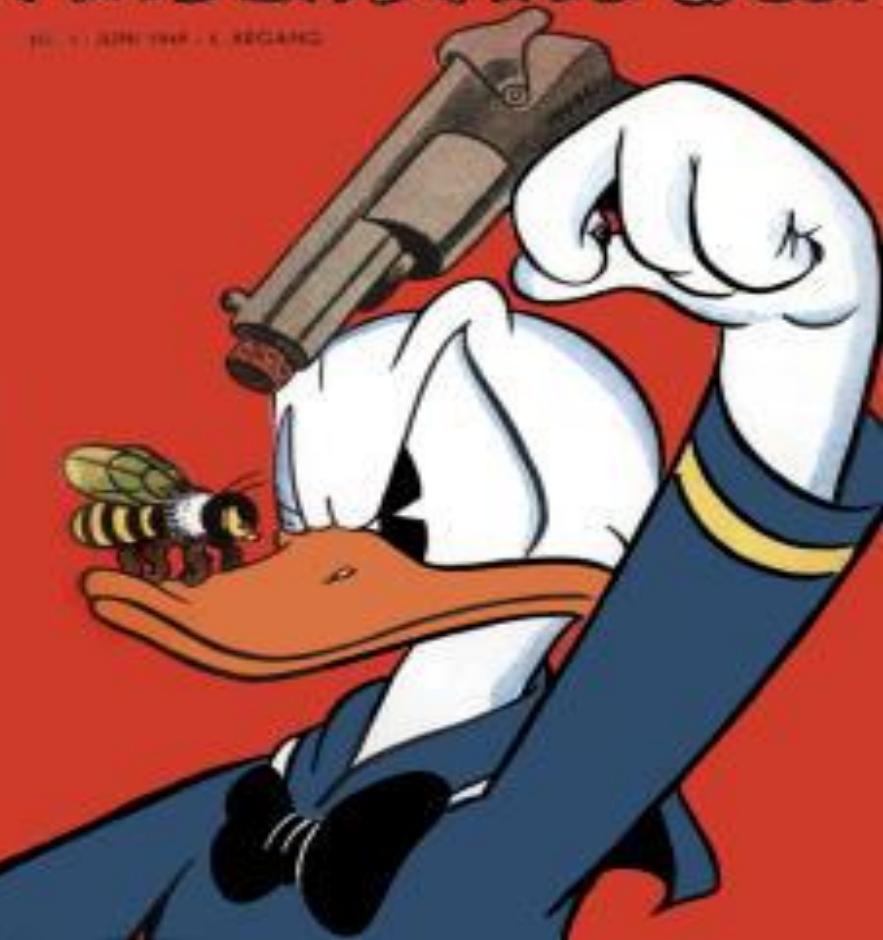
# Rhododendron Luteum





WALT DISNEY'S  
**ANDERS AND & CO.**

PRODUCED BY WALT DISNEY



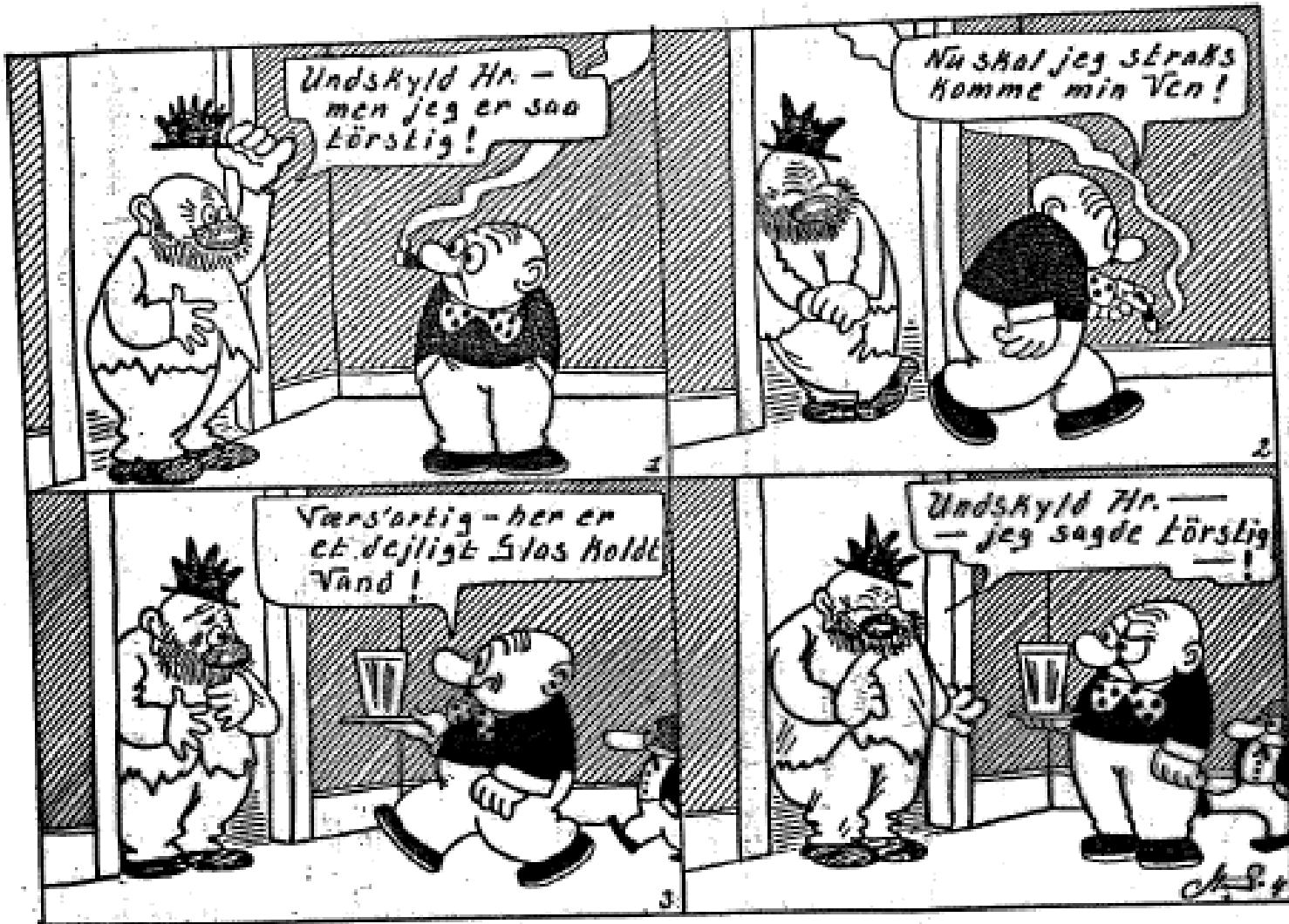
# Slut



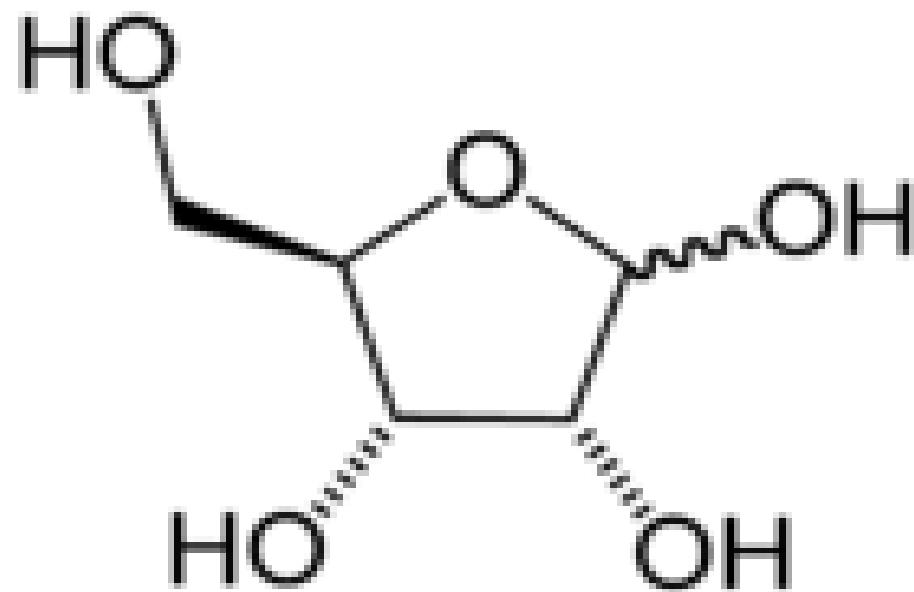
## Hyldehuset

Honning og fyldt chokolade

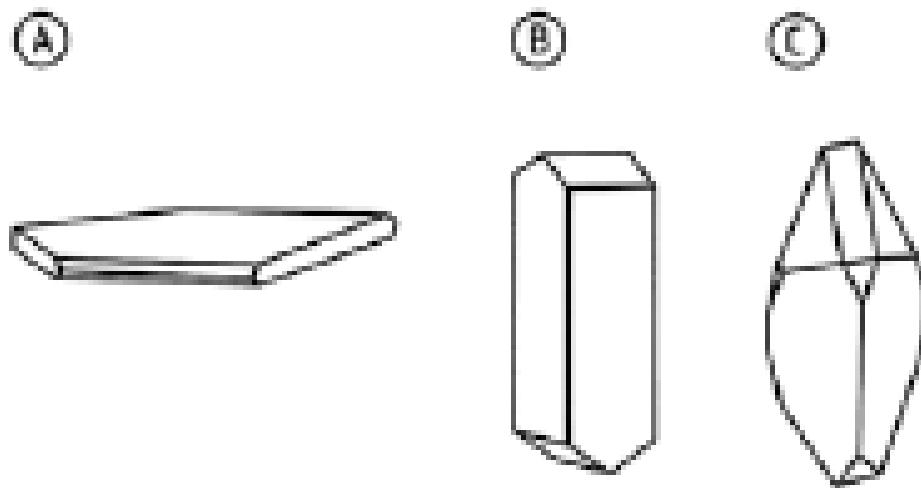
# Vand.. og for meget af det



# Furanose



# Glucose krystaller



A)  $\alpha$  - Monohydrate; B)  $\alpha$  - Anhydrous; C)  $\beta$  - Anhydrous

Figure 2.1 Crystal forms of glucose (Ullmann, 2003)

# 4 sukkertyper

