

# Hans

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **25**
- SRM **20.2**
- Style **Classic Rauchbier**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

## Steps

- Temp **68 C**, Time **30 min**
- Temp **73 C**, Time **30 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **30 min** at **68C**
- Keep mash **30 min** at **73C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Wędzony bukiem Viking Malt	1.5 kg (42.9%)	82 %	10
Grain	Strzegom Monachijski typ I	1 kg (28.6%)	79 %	16
Grain	Strzegom Karmel 600	0.2 kg (5.7%)	68 %	601
Grain	strzegom carmel aromatic	0.3 kg (8.6%)	68 %	180
Grain	Płatki owsiane	0.5 kg (14.3%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	30 g	60 min	4 %
Boil	Saaz (Czech Republic)	20 g	10 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
wyeast 1450 denny's favorite 50	Ale	Liquid	125 ml	wyeast

## Extras

Type	Name	Amount	Use for	Time
Water Agent	kwask mlekowy	2 g	Mash	10 min