

# Quad

- Gravity **21.1 BLG**
- ABV **9.4 %**
- IBU **17**
- SRM **43.5**
- Style **Belgian Dark Strong Ale**

## Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **31.5 liter(s)**

## Mash information

- Mash efficiency **73 %**
- Liquor-to-grist ratio **3.9 liter(s) / kg**
- Mash size **31 liter(s)**
- Total mash volume **39 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **69 C**, Time **30 min**
- Temp **75 C**, Time **10 min**

## Mash step by step

- Heat up **31 liter(s)** of strike water to **69.6C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **69C**
- Keep mash **10 min** at **75C**
- Sparge using **8.5 liter(s)** of **76C** water or to achieve **31.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) Bel	6 kg (60.3%)	80 %	6
Grain	Melanoiden Malt	0.6 kg (6%)	80 %	39
Grain	Aromatic Malt	0.4 kg (4%)	78 %	51
Grain	Oats, Flaked	0.4 kg (4%)	80 %	2
Grain	Wheat, Flaked	0.4 kg (4%)	77 %	4
Grain	Special W	0.15 kg (1.5%)	65.2 %	315
Sugar	Candi Sugar, Dark	2 kg (20.1%)	78.3 %	542

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	50 g	60 min	3.7 %
Boil	Hallertau mittelfrueh	50 g	15 min	3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP500 - Trappist Ale Yeast	Ale	Liquid	1000 ml	White Labs

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Calcium Chloride	2.9 g	Mash	80 min
Water Agent	Campden Tablet	0.5 g	Mash	80 min
Water Agent	Epsom Salt	2.3 g	Mash	80 min
Water Agent	Vitamin C	2 g	Mash	80 min
Water Agent	Lactic Acid	4 g	Mash	80 min
Water Agent	Calcium Sulphate	3 g	Mash	80 min
Water Agent	Epsom Salt	0.56 g	Mash	0 min
Water Agent	Calcium Chloride	0.7 g	Mash	0 min
Water Agent	Vitamin C	1 g	Mash	0 min
Water Agent	Calcium Sulphate	0.7 g	Mash	0 min
Water Agent	Lactic Acid	0.7 g	Mash	0 min
Water Agent	Campden Tablet	0.3 g	Mash	0 min