

## #25 Quadrupel

- Gravity **20.9 BLG**
- ABV **9.3 %**
- IBU **29**
- SRM **20**
- Style **Belgian Dark Strong Ale**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **15.9 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **3.4 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (56.6%)	80 %	5
Grain	Biscuit Malt	1 kg (18.9%)	79 %	45
Grain	Karmelowy Czerwony	0.5 kg (9.4%)	75 %	59
Grain	Strzegom Karmel 150	0.35 kg (6.6%)	75 %	150
Grain	Strzegom Karmel 300	0.15 kg (2.8%)	70 %	299
Sugar	Cukier	0.3 kg (5.7%)	100 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	45 g	60 min	3.9 %
Boil	Lublin (Lubelski)	15 g	30 min	3.9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M47 Belgian Abbey	Ale	Slant	150 ml	Mangrove Jack's