

## #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 |