

Helles

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **21**
- SRM **4.3**
- Style **Munich Helles**

Batch size

- Expected quantity of finished beer **66 liter(s)**
- Trub loss **1 %**
- Size with trub loss **68 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **77.7 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **45 liter(s)**
- Total mash volume **60 liter(s)**

Steps

- Temp **78 C**, Time **5 min**
- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **45 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **47.7 liter(s)** of **76C** water or to achieve **77.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pilsner malt | 13 kg (86.7%) | 82 % | 4 |
| Grain | Pszeniczny | 1.5 kg (10%) | 85 % | 4 |
| Grain | Viking Melanoidynowy | 0.5 kg (3.3%) | 70 % | 60 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------------|--------|--------|------------|
| Boil | Iunga | 25 g | 60 min | 13 % |
| Aroma (end of boil) | Saaz (Czech Republic) | 150 g | 20 min | 3 % |
| Aroma (end of boil) | Saaz (Czech Republic) | 150 g | 1 min | 3 % |