

Full Aroma Hops , Carlberg z wiki org

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **45**
- SRM **5**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **75C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Viking Pilsner malt | 5 kg (90.9%) | 82 % | 4 |
| Grain | Karmelowy Jasny 30EBC | 0.5 kg (9.1%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|----------|------------|
| Boil | Magnum | 15 g | 90 min | 12 % |
| Boil | Lublin (Lubelski) | 40 g | 45 min | 3.3 % |
| Boil | Magnum | 15 g | 15 min | 12 % |
| Boil | Amarillo | 13 g | 10 min | 9.5 % |
| Dry Hop | Amarillo | 15 g | 4 day(s) | 9.5 % |
| Dry Hop | Cascade | 20 g | 4 day(s) | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|--------------------|
| Safale S-04 | Ale | Slant | 100 ml | Pierwsze pokolenie |