

Special BITTER 03

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **31**
- SRM **8.5**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.5 kg (52.1%) | 80 % | 5 |
| Grain | Viking Golden ale | 2 kg (41.7%) | 80 % | 14 |
| Grain | Strzegom Karmel 150 | 0.3 kg (6.3%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Challenger | 35 g | 60 min | 7 % |
| Aroma (end of boil) | Fuggles | 30 g | 5 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------|------|--------|--------|------------|
| WLP002 - English Ale Yeast | Ale | Liquid | 20 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Fining | Mech irlandzki | 4 g | Boil | 10 min |