

Bitter [K]

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **31**
- SRM **9.9**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **12.8 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **12.8 liter(s)** of strike water to **71.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|-----------------|-------|------|
| Grain | Viking Pale Ale malt | 2.6 kg (79%) | 82 % | 5 |
| Grain | Słód Caramunich Typ II Weyermann | 0.35 kg (10.6%) | 73 % | 120 |
| Sugar | cukier | 0.1 kg (3%) | 100 % | 3 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.02 kg (0.6%) | 73 % | 1001 |
| Grain | Carabelge | 0.22 kg (6.7%) | 80 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil | Willamette | 17 g | 50 min | 5.2 % |
| Boil | East Kent Goldings | 12 g | 50 min | 6.3 % |
| Aroma (end of boil) | Willamette | 7 g | 5 min | 5.2 % |
| Aroma (end of boil) | East Kent Goldings | 7 g | 5 min | 6.3 % |
| Whirlpool | Willamette | 15 g | 20 min | 5.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|----------------------|-----|--------|--------|------------------|
| FM12 W szkocką kratę | Ale | Liquid | 200 ml | Fermentum Mobile |
|----------------------|-----|--------|--------|------------------|