

Bitter #2

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **36**
- SRM **12.3**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **14.2 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **14.2 liter(s)** of strike water to **77.6C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------|-----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4.32 kg (76.2%) | 80 % | 5 |
| Grain | Strzegom Pszeniczny | 0.07 kg (1.2%) | 81 % | 6 |
| Grain | Strzegom Karmel 150 | 0.43 kg (7.6%) | 75 % | 150 |
| Grain | Strzegom Karmel 300 | 0.15 kg (2.6%) | 70 % | 299 |
| Grain | Strzegom Monachijski typ I | 0.7 kg (12.3%) | 79 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|---------|--------|------------|
| Boil | Marynka | 28.82 g | 60 min | 8.7 % |
| Boil | East Kent Goldings | 12.97 g | 30 min | 5.1 % |
| Boil | East Kent Goldings | 7.2 g | 10 min | 5.1 % |