

extra special bitter

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **40**
- SRM **10.9**
- 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 **90 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **68 C**, Time **80 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **80 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (66.7%) | 80 % | 5 |
| Grain | Biscuit Malt | 1 kg (16.7%) | 79 % | 45 |
| Grain | Karmelowy Czerwony | 1 kg (16.7%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|----------|------------|
| Boil | Fuggles | 20 g | 60 min | 5.9 % |
| Boil | East Kent Goldings | 20 g | 60 min | 5.4 % |
| Aroma (end of boil) | Fuggles | 30 g | 15 min | 5.9 % |
| Aroma (end of boil) | East Kent Goldings | 30 g | 15 min | 5.4 % |
| Dry Hop | Fuggles | 50 g | 3 day(s) | 5.9 % |
| Dry Hop | East Kent Goldings | 50 g | 3 day(s) | 5.4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|--------|
| Fining | mech irlandzki | 5 g | Boil | 15 min |
| Water Agent | gips piwowarski | 4 g | Mash | 80 min |