

English Special Bitter

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **44**
- SRM **12.2**
- 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 **7 %/h**
- Boil size **24.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt | 4.8 kg (89.7%) | 80 % | 5 |
| Grain | Weyermann - Carapils | 0.3 kg (5.6%) | 78 % | 4 |
| Grain | Amber Malt | 0.15 kg (2.8%) | 75 % | 90 |
| Grain | Weyermann - Carafa II Special | 0.1 kg (1.9%) | 70 % | 1100 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 25 g | 60 min | 16.5 % |
| Boil | Marynka | 15 g | 0 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------------|------|--------|--------|-------------|
| Wyeast - London ESB Ale | Ale | Liquid | 100 ml | Wyeast Labs |

Drożdże namnożone w starterze 1 l 10 Blg.