

Bitter Bramling

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **33**
- SRM **11.4**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.3 liter(s)**
- Total mash volume **27 liter(s)**

Steps

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

Mash step by step

- Heat up **20.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Briess - Pale Ale Malt | 6 kg (88.9%) | 80 % | 7 |
| Grain | Crystal | 0.5 kg (7.4%) | 80 % | 163 |
| Grain | Strzegom Karmel 150 | 0.25 kg (3.7%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil | Fuggles | 40 g | 60 min | 4.5 % |
| Boil | East Kent Goldings | 20 g | 60 min | 5.1 % |
| Boil | Bramling Cross | 10 g | 60 min | 4.3 % |
| Boil | Fuggles | 10 g | 20 min | 4.5 % |
| Boil | East Kent Goldings | 10 g | 20 min | 5.1 % |
| Aroma (end of boil) | Bramling Cross | 40 g | 0 min | 4.3 % |
| Aroma (end of boil) | East Kent Goldings | 20 g | 0 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------|------|-------|--------|------------------|
| FM10 O czym szumią wierzby | Ale | Slant | 500 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|------|--------|---------|--------|
| Water Agent | gips | 5 g | Mash | 60 min |