

Ale karmelowy

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **62**
- SRM **21.8**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **67 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (80%) | 80 % | 5 |
| Grain | Strzegom Karmel 300 | 1 kg (16%) | 70 % | 299 |
| Grain | Karmelowy Pszeniczny Strzegom | 0.25 kg (4%) | 79 % | 130 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Magnum | 40 g | 90 min | 13.5 % |
| Aroma (end of boil) | Lublin (Lubelski) | 30 g | 5 min | 4 % |
| Aroma (end of boil) | Hallertau | 30 g | 5 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 12 g | Safale |