

Karmelowe Ale

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **21**
- SRM **7.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **11.4 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 | 3 kg (60%) | 80 % | 5 |
| Grain | Karmelowy Jasny 30EBC | 2 kg (40%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | izabella | 50 g | 30 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 10.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|---------|----------------|--------|---------|--------|
| Finning | mech irlandzki | 5 g | Boil | 15 min |