

# karmelowe H9

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **25**
- SRM **11.8**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **20.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **18.1 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                              | Amount         | Yield | EBC |
|-------|-----------------------------------|----------------|-------|-----|
| Grain | Viking Pilsner zero               | 4 kg (58.8%)   | 82 %  | 4   |
| Grain | Cookie Viking malt (bursztynowy ) | 1.5 kg (22.1%) | --- % | 55  |
| Grain | Amber                             | 1 kg (14.7%)   | 70 %  | 70  |
| Grain | Karmelowy Jasny 30EBC             | 0.3 kg (4.4%)  | 75 %  | 30  |

## Hops

| Use for | Name                  | Amount | Time   | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil    | Saaz (Czech Republic) | 30 g   | 60 min | 4.5 %      |
| Boil    | Zeus US               | 20 g   | 15 min | 15.7 %     |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safbrew T-58 | Ale  | Dry  | 11.5 g | Safbrew    |