

# Karmelowe na słodko

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **18**
- SRM **5.7**

## 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 **3.5 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **29.3 liter(s)**

## Steps

- Temp **66 C**, Time **10 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **22.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **10 min** at **66C**
- Keep mash **50 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount        | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Pilsner (2 Row) Bel | 4 kg (61.5%)  | 79 %  | 4   |
| Grain | Strzegom Wiedeński  | 2 kg (30.8%)  | 79 %  | 10  |
| Grain | Carared             | 0.5 kg (7.7%) | 75 %  | 39  |

## Hops

| Use for             | Name               | Amount | Time   | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil                | Marynka            | 18 g   | 60 min | 10 %       |
| Boil                | East Kent Goldings | 15 g   | 10 min | 5.1 %      |
| Aroma (end of boil) | East Kent Goldings | 15 g   | 0 min  | 5.1 %      |

## Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-04 | Ale  | Dry  | 11 g   | ---        |