

# Kozel Karminowy

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **19**
- SRM **8.4**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount     | Yield | EBC |
|-------|-----------------------------|------------|-------|-----|
| Grain | Strzegom Monachijski typ II | 3 kg (50%) | 79 %  | 22  |
| Grain | Strzegom Wiedeński          | 3 kg (50%) | 79 %  | 10  |

## Hops

| Use for | Name     | Amount | Time   | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil    | Marynka  | 20 g   | 60 min | 8.8 %      |
| Boil    | Tettnang | 15 g   | 15 min | 3.8 %      |

## Yeasts

| Name                | Type  | Form  | Amount | Laboratory |
|---------------------|-------|-------|--------|------------|
| wyeast munich lager | Lager | Slant | 100 ml | ---        |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | Mech Irlandzki | 5 g    | Boil    | 15 min |