

# KARAF - Czarny Rycerz

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **19**
- SRM **23.1**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **19.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

## Steps

- Temp **53 C**, Time **10 min**
- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **60 min**

## Mash step by step

- Heat up **11.7 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **15 min** at **64C**
- Keep mash **60 min** at **72C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **19.9 liter(s)** of wort

## Fermentables

| Type  | Name   | Amount         | Yield | EBC  |
|-------|--|----------------|-------|------|
| Grain | Viking Pilsner malt                          | 1.8 kg (46.2%) | 82 %  | 4    |
| Grain | Monachijski typ II<br>20-25 EBC<br>Weyermann | 1.5 kg (38.5%) | 80 %  | 20   |
| Grain | Słód Caramunich<br>Typ II Weyermann          | 0.4 kg (10.3%) | 73 %  | 120  |
| Grain | Weyermann -<br>Carafa II                     | 0.1 kg (2.6%)  | 70 %  | 690  |
| Grain | Viking Barwiący                              | 0.1 kg (2.6%)  | 65 %  | 1400 |

## Hops

| Use for | Name                     | Amount | Time   | Alpha acid |
|---------|--------------------------|--------|--------|------------|
| Boil    | Saaz (Czech<br>Republic) | 24 g   | 60 min | 4.5 %      |
| Boil    | Saaz (Czech<br>Republic) | 12 g   | 15 min | 4.5 %      |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|                                   |     |     |       |           |
|-----------------------------------|-----|-----|-------|-----------|
| Lallemand - LalBrew<br>Voss Kveik | Ale | Dry | 5.5 g | Lallemand |
|-----------------------------------|-----|-----|-------|-----------|