

Warka nr 23 Belgian Dubbel

- Gravity **18.9 BLG**
- ABV **8.2 %**
- IBU **20**
- SRM **12.9**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.9 liter(s)**
- Total mash volume **13.2 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **2 min**

Mash step by step

- Heat up **9.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **6.1 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 2.5 kg (67.6%) | 80 % | 4 |
| Grain | Strzegom Wiedeński | 0.5 kg (13.5%) | 79 % | 10 |
| Grain | Strzegom Karmel 300 | 0.2 kg (5.4%) | 70 % | 299 |
| Grain | Karmelowy Czerwony | 0.1 kg (2.7%) | 75 % | 59 |
| Sugar | Cukier kandyzowany biały | 0.4 kg (10.8%) | --- % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil | Perle | 15 g | 60 min | 7 % |
| Aroma (end of boil) | Hallertau Spalt Select | 8 g | 10 min | 3.4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|------|--------|---------|------------------|
| FM28 Habit opata | Ale | Liquid | 1000 ml | Fermentum Mobile |