

Dunkles I miejsce Małopolski 2024

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **23**
- SRM **15.8**
- Style **Munich Dunkel**

Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **0 %**
- Size with trub loss **60 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **68.7 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **45.9 liter(s)**
- Total mash volume **61.2 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **45.9 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **38.1 liter(s)** of **76C** water or to achieve **68.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--|----------------|-------|------|
| Grain | Monachijski typ II 20-25 EBC Weyermann | 10 kg (65.4%) | 80 % | 20 |
| Grain | Viking Pilsner malt | 3.5 kg (22.9%) | 82 % | 4 |
| Grain | Melanoidynowy Castlemalting | 1 kg (6.5%) | 75 % | 80 |
| Grain | Weyermann - Carared | 0.5 kg (3.3%) | 75 % | 45 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.3 kg (2%) | 73 % | 1001 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Izabella | 100 g | 40 min | 6.5 % |
| Aroma (end of boil) | Izabella | 50 g | 3 min | 6.5 % |