

5. Orzechówka (Dunkel)

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **25**
- SRM **21.5**
- Style **Munich Dunkel**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **20.7 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **11.5 liter(s)**
- Total mash volume **16.1 liter(s)**

Steps

- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **45 min**

Mash step by step

- Heat up **11.5 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **15 min** at **64C**
- Keep mash **45 min** at **72C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **20.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	3 kg (65.2%)	79 %	16
Grain	Strzegom Monachijski typ II	1 kg (21.7%)	79 %	22
Grain	Viking Melanoidynowy	0.4 kg (8.7%)	75 %	60
Grain	Carafa	0.2 kg (4.3%)	70 %	900

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	20 g	60 min	7.5 %
Aroma (end of boil)	Perle	10 g	10 min	7.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	11 g	Fermentis