

Orzechówka (Dunkel)

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **25**
- SRM **21.4**
- 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 **75 min**
- Evaporation rate **10 %/h**
- Boil size **19.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.6 liter(s)**
- Total mash volume **15.4 liter(s)**

Steps

- Temp **69 C**, Time **45 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **11.6 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **45 min** at **69C**
- Keep mash **5 min** at **78C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **19.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	2 kg (51.9%)	79 %	16
Grain	Strzegom Monachijski typ II	1.3 kg (33.8%)	79 %	22
Grain	Viking Melanoidynowy	0.2 kg (5.2%)	75 %	70
Grain	Caramunich® typ I	0.2 kg (5.2%)	73 %	80
Grain	Weyermann - Dehusked Carafo II	0.15 kg (3.9%)	70 %	1150

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Perle	15 g	75 min	7.5 %
Aroma (end of boil)	Perle	10 g	20 min	7.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
LalBrew Diamond Lager	Lager	Dry	11 g	Lallemand