

## Niemieckie eksportowe 2

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- Gravity **12.1 BLG**
- ABV ---
- IBU **33**
- SRM **4**
- Style **Dortmunder Export**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **65 min**
- Evaporation rate **7 %/h**
- Boil size **25.8 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **40 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **72C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **25.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (77.8%)	80 %	4
Grain	Briess - Carapils Malt	1 kg (22.2%)	74 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	16 g	60 min	14.2 %
Boil	Hallertau Mittelfruh	15 g	30 min	3 %
Boil	Hallertau Mittelfruh	15 g	15 min	3 %
Aroma (end of boil)	Hallertau Mittelfruh	20 g	0 min	3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM30 Bohemska rapsodia	Lager	Liquid	1200 ml	Fermentum Mobile