

## IP N 04/21/XII

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- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **33**
- SRM **13.3**
- Style **Old Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

### Steps

- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **69 C**, Time **30 min**
- Temp **75 C**, Time **30 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **69C**
- Keep mash **30 min** at **75C**
- Sparge using **11.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	4.2 kg (49.4%)	79 %	10
Grain	Viking Malt Smoked Peat	2.4 kg (28.2%)	81 %	10
Grain	Viking Malt Karmel 200	0.2 kg (2.4%)	75 %	200
Grain	Viking Malt Cookie	0.2 kg (2.4%)	72 %	50
Sugar	burak czerwony	1 kg (11.8%)	11 %	50
Sugar	cukier	0.5 kg (5.9%)	99 %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Dry Hop	Lublin (Lubelski)	10 g	7 day(s)	6 %
Dry Hop	Mosaic	10 g	7 day(s)	12.2 %
Aroma (end of boil)	Lublin (Lubelski)	20 g	5 min	6 %
Aroma (end of boil)	Mosaic	20 g	5 min	12.2 %
Boil	Columbus/Tomahawk/Zeus	20 g	10 min	14.4 %
Boil	Columbus/Tomahawk/Zeus	20 g	30 min	14.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safe US-5	Ale	Dry	11.5 g	Fermentis