

# Kombinator

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **24**
- SRM **13.3**
- Style **Irish Red Ale**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.6 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **21.9 liter(s)**

## Steps

- Temp **52 C**, Time **15 min**
- Temp **68 C**, Time **20 min**
- Temp **70 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18.3 liter(s)** of strike water to **55.2C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **20 min** at **68C**
- Keep mash **40 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **2 liter(s)** of **76C** water or to achieve **16.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.3 kg (35.6%)	80 %	4
Grain	Strzegom Pszeniczny	1.3 kg (35.6%)	81 %	6
Grain	Bestmalz Red X	0.3 kg (8.2%)	79 %	35
Grain	Karmelowy Czerwony	0.5 kg (13.7%)	75 %	72
Grain	Strzegom Wiedeński	0.2 kg (5.5%)	79 %	10
Grain	Strzegom pszenica prażona	0.05 kg (1.4%)	70 %	1000

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	13 g	60 min	10 %
Boil	Lomik	10 g	10 min	3.8 %
Whirlpool	Oktawia	10 g	1 min	7.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Safale S-04	Ale	Dry	11.5 g	Safale
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### Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc T	5 g	Boil	5 min
Spice	kolendra	2 g	Boil	10 min