

2 warka

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **12**
- SRM **14.5**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **26.6 liter(s)**

Steps

- Temp **53 C**, Time **20 min**
- Temp **67 C**, Time **49 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **19.6 liter(s)** of strike water to **58.9C**
- Add grains
- Keep mash **20 min** at **53C**
- Keep mash **49 min** at **67C**
- Keep mash **30 min** at **72C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1 kg (14.3%)	81 %	4
Grain	Strzegom Monachijski typ I	2 kg (28.6%)	79 %	16
Grain	Karmelowy Jasny 30EBC	1 kg (14.3%)	75 %	30
Grain	Viking melanoidynowy	0.5 kg (7.1%)	75 %	60
Grain	Karmelowy Pszeniczny Strzegom	1 kg (14.3%)	79 %	130
Grain	Carahell	0.5 kg (7.1%)	77 %	26
Grain	Weyermann - Carapils	1 kg (14.3%)	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	7 g	60 min	15.5 %
Aroma (end of boil)	Mosaic	7 g	10 min	11.3 %
Dry Hop	Mosaic	5 g	5 day(s)	11.3 %
Dry Hop	Columbus/Tomahawk/Zeus	5 g	5 day(s)	15.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	500 ml	---

Extras

Type	Name	Amount	Use for	Time
Other	Ananas	1000 g	Secondary	7 day(s)
Spice	Skórka pomarańczy	10 g	Secondary	7 day(s)