

koziółek czerwony

- Gravity **19.1 BLG**
- ABV **8.3 %**
- IBU **26**
- SRM **11.4**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **35.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **35 liter(s)**
- Total mash volume **45 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **71 C**, Time **25 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **35 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **25 min** at **71C**
- Keep mash **10 min** at **77C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **35.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bestmalz Red X	2 kg (20%)	79 %	30
Grain	Wędzony bukiem Viking Malt	3 kg (30%)	82 %	10
Grain	viking-red-actiw	2 kg (20%)	79 %	10
Grain	diastatyczny	1 kg (10%)	80 %	4
Grain	Weyermann - Carapils	1 kg (10%)	78 %	4
Grain	Viking melanoidynowy	1 kg (10%)	75 %	60

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Lomik	50 g	15 min	3.8 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	15 min	4 %
Boil	Marynka	30 g	20 min	10 %
Boil	Marynka	20 g	5 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
german lager	Lager	Slant	500 ml	fermentis