

Duathlon

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **48**
- SRM **37.3**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **80 min**
- Evaporation rate **14 %/h**
- Boil size **20.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **16.7 liter(s)**

Steps

- Temp **67 C**, Time **80 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **12.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **20.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód pilzneński	2.73 kg (57%)	80 %	3
Grain	słód monachijski ciemny	0.82 kg (17.1%)	78 %	22
Grain	słód pszeniczny jasny	0.14 kg (2.9%)	82 %	5
Grain	słód karmelowy 600	0.14 kg (2.9%)	68 %	600
Grain	słód Caramunich typ I	0.07 kg (1.5%)	73 %	90
Grain	słód barwiący	0.07 kg (1.5%)	65 %	1400
Grain	słód Carafa typ I	0.07 kg (1.5%)	65 %	900
Grain	słód żytni palony	0.14 kg (2.9%)	--- %	650
Adjunct	palony jęczmień	0.2 kg (4.2%)	--- %	1150
Adjunct	płatki jęczmienne	0.27 kg (5.6%)	--- %	4
Adjunct	płatki owsiane	0.14 kg (2.9%)	--- %	3

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Zeus	6.82 g	80 min	15.5 %
Boil	Citra	10.23 g	40 min	13.7 %

Boil	Simcoe	10.23 g	15 min	13.2 %
Boil	Citra	10.23 g	10 min	13.7 %
Boil	Cascade	13.64 g	5 min	8.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safeale US-05	Ale	Dry	11.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	4.77 g	Boil	15 min
Other	pożywka dla drożdży	4.77 g	Boil	15 min