

11# American Rye 12 blg

- Gravity **10 BLG**
- ABV **4 %**
- IBU **20**
- SRM **4**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **75 min**
- Evaporation rate **5 %/h**
- Boil size **25.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

Steps

- Temp **65 C**, Time **75 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **12.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **75 min** at **65C**
- Keep mash **5 min** at **76C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.3 kg (30.2%)	81 %	4
Grain	maris otter pale ale	1.4 kg (32.6%)	80 %	6
Grain	Żytni	1.4 kg (32.6%)	85 %	8
Grain	Pszeniczny	0.2 kg (4.7%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	75 min	10 %
Aroma (end of boil)	Cascade	25 g	1 min	6 %
Aroma (end of boil)	Ahtanum	25 g	1 min	5 %
Dry Hop	Cascade	25 g	3 day(s)	6 %
Dry Hop	Ahtanum	25 g	3 day(s)	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	150 ml	Danstar