

# Stautua Wolności

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **72**
- SRM **32.6**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

## Steps

- Temp **68 C**, Time **45 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2 kg (37%)	85 %	7
Grain	Weyermann - Vienna Malt	2 kg (37%)	81 %	8
Grain	Weyermann - Pale Wheat Malt	0.5 kg (9.3%)	85 %	5
Grain	Weyermann - Specjal W	0.3 kg (5.6%)	68 %	300
Grain	Weyermann - Roast Barley Malt	0.4 kg (7.4%)	55 %	1000
Grain	Weyermann - Roast Rye Malt	0.2 kg (3.7%)	75 %	650

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	35 g	45 min	11.7 %
Boil	Amarillo	30 g	30 min	6.6 %
Boil	Centennial	30 g	20 min	8.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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FM52 Amerykański Sen	Ale	Liquid	200 ml	Fermentum Mobile
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### Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips Piwowarski	5 g	Mash	---

### Notes

- W trakcie Mash out-u dodajemy dopiero słody palone.  
*Feb 27, 2017, 6:02 PM*