

## WARKA #9 Amercian Stout

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **39**
- SRM **27.3**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **31 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **76 C**, Time **3 min**

### Mash step by step

- Heat up **19.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **3 min** at **76C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **31 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (76.9%)	80 %	5
Grain	Strzegom Monachijski typ I	0.5 kg (7.7%)	79 %	16
Grain	Pszeniczny	0.5 kg (7.7%)	85 %	4
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.1%)	68 %	1100
Grain	Jęczmień palony	0.3 kg (4.6%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	30 g	90 min	7.8 %
Boil	Centennial	30 g	15 min	10.5 %