

# Dzien Niepodległości

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **19**
- SRM **5.5**
- Style **Standard American Lager**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **19.8 liter(s)**

## Steps

- Temp **45 C**, Time **14 min**
- Temp **62 C**, Time **34 min**
- Temp **72 C**, Time **34 min**
- Temp **78 C**, Time **14 min**

## Mash step by step

- Heat up **14.8 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **14 min** at **45C**
- Keep mash **34 min** at **62C**
- Keep mash **34 min** at **72C**
- Keep mash **14 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	1.35 kg (27.3%)	82 %	4
Grain	Weyermann - Vienna Malt	3.45 kg (69.7%)	81 %	8
Grain	Caramunich® typ I	0.147 kg (3%)	73 %	80

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	15 g	60 min	9.5 %
Boil	Laola	20 g	40 min	1 %
Boil	Hallertau	20 g	5 min	4.5 %
Dry Hop	Pulawski	30 g	10 day(s)	7.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	11 g	---

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	10 min

### Notes

- Warzenie 16.11.2019 temperatura fermentacji burzliwej 18 stopni.  
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