

# Znak Leszy

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **39**
- SRM **41.3**
- Style **Oatmeal 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 **2.5 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **20.1 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield | EBC  |
|-------|-----------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt        | 3 kg (52.2%)   | 80 %  | 5    |
| Grain | Viking Wheat Malt           | 1 kg (17.4%)   | 83 %  | 5    |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (8.7%)  | 68 %  | 1200 |
| Grain | Strzegom Karmel 600         | 0.5 kg (8.7%)  | 68 %  | 601  |
| Grain | Żytni                       | 0.25 kg (4.3%) | 85 %  | 8    |
| Grain | Płatki owsiane              | 0.5 kg (8.7%)  | 85 %  | 3    |

## Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Summit            | 10 g   | 60 min | 18 %       |
| Boil                | Ariana            | 10 g   | 60 min | 11.7 %     |
| Aroma (end of boil) | Lublin (Lubelski) | 5 g    | 15 min | 4 %        |
| Aroma (end of boil) | Summit            | 5 g    | 15 min | 18 %       |
| Aroma (end of boil) | Ariana            | 5 g    | 15 min | 11.7 %     |
| Whirlpool           | Simcoe            | 5 g    | 0 min  | 13.2 %     |
| Whirlpool           | Ariana            | 5 g    | 0 min  | 11.7 %     |

|           |                   |     |       |     |
|-----------|-------------------|-----|-------|-----|
| Whirlpool | Lublin (Lubelski) | 5 g | 0 min | 4 % |
|-----------|-------------------|-----|-------|-----|

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |

### Extras

| Type | Name         | Amount | Use for   | Time     |
|------|--------------|--------|-----------|----------|
| Herb | Pączki sosny | 50 g   | Secondary | 5 day(s) |

### Notes

- <http://www.fontspace.com/cloutierfontes/cf-one-two-trees>  
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