

# Żmudzin

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- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **15**
- SRM **6.1**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **62 C**, Time **35 min**
- Temp **70 C**, Time **40 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **35 min** at **62C**
- Keep mash **40 min** at **70C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

| Type  | Name                  | Amount       | Yield | EBC |
|-------|-----------------------|--------------|-------|-----|
| Grain | Pilzneński            | 3 kg (60%)   | 81 %  | 4   |
| Grain | Strzegom Wiedeński    | 1.2 kg (24%) | 79 %  | 10  |
| Grain | Pszeniczny            | 0.5 kg (10%) | 85 %  | 4   |
| Grain | Weyermann - Carawheat | 0.3 kg (6%)  | 77 %  | 97  |

## Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | Perle | 20 g   | 60 min | 7 %        |

## Yeasts

| Name           | Type | Form   | Amount | Laboratory |
|----------------|------|--------|--------|------------|
| senalio mieles | Ale  | Liquid | 250 ml | FM         |