

# Bezglutenowe ciemne 20l nowa receptura

- Gravity **8.3 BLG**
- ABV **3.2 %**
- IBU **31**
- SRM **---**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.5 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **45 C**, Time **20 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **18.7 liter(s)** of strike water to **48.6C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **30 min** at **72C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

## Fermentables

| Type  | Name              | Amount          | Yield | EBC |
|-------|-------------------|-----------------|-------|-----|
| Grain | Słód gryczany     | 4 kg (74.9%)    | 48 %  | --- |
| Grain | Grys kukurydziany | 0.67 kg (12.5%) | 80 %  | --- |
| Grain | Proso             | 0.67 kg (12.5%) | 51 %  | --- |

## Hops

| Use for | Name   | Amount  | Time   | Alpha acid |
|---------|--------|---------|--------|------------|
| Boil    | Simcoe | 3.33 g  | 60 min | 13.3 %     |
| Boil    | Simcoe | 3.33 g  | 45 min | 13.3 %     |
| Boil    | Simcoe | 6.67 g  | 30 min | 13.3 %     |
| Boil    | Simcoe | 13.33 g | 15 min | 13.3 %     |

## Yeasts

| Name        | Type | Form | Amount  | Laboratory |
|-------------|------|------|---------|------------|
| Safale S-04 | Ale  | Dry  | 11.47 g | Safale     |

## Extras

| Type  | Name       | Amount  | Use for | Time   |
|-------|------------|---------|---------|--------|
| Spice | Pędy sosny | 13.33 g | Mash    | 30 min |
| Spice | Pędy sosny | 13.33 g | Boil    | 5 min  |

|       |            |         |           |          |
|-------|------------|---------|-----------|----------|
| Spice | Pędy sosny | 33.33 g | Secondary | 4 day(s) |
|-------|------------|---------|-----------|----------|