

# STOUT HARDKOROWY 25L

- Gravity **15.2 BLG**
- ABV ---
- IBU **72**
- SRM **61.9**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.5 liter(s)**
- Total mash volume **28.6 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **21.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield  | EBC  |
|-------|-----------------------------|----------------|--------|------|
| Grain | Pale Ale Maris Otter        | 3.4 kg (47.6%) | 80 %   | 5    |
| Grain | Strzegom Monachijski typ I  | 1.3 kg (18.2%) | 79 %   | 16   |
| Grain | słód kawowy Belgia          | 0.5 kg (7%)    | 75.5 % | 500  |
| Grain | żytni czekoladowy Weyermann | 0.5 kg (7%)    | 73 %   | 700  |
| Grain | Słód Midnight Wheat Briess  | 0.5 kg (7%)    | 73 %   | 1100 |
| Grain | palony Black Bestmalz       | 0.5 kg (7%)    | 73.5 % | 1200 |
| Grain | Płatki owsiane              | 0.25 kg (3.5%) | 85 %   | 3    |
| Grain | Strzegom Karmel 600         | 0.2 kg (2.8%)  | 68 %   | 601  |

## Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 30 g   | 60 min | 16.8 %     |
| Boil    | Cascade                | 10 g   | 15 min | 6.7 %      |
| Boil    | Mosaic                 | 10 g   | 15 min | 11.8 %     |
| Boil    | Simcoe                 | 10 g   | 15 min | 13.3 %     |

|           |         |      |        |        |
|-----------|---------|------|--------|--------|
| Boil      | Cascade | 20 g | 7 min  | 6.7 %  |
| Boil      | Mosaic  | 20 g | 7 min  | 11.8 % |
| Boil      | Simcoe  | 20 g | 7 min  | 13.3 % |
| Whirlpool | Cascade | 20 g | 60 min | 6.7 %  |
| Whirlpool | Mosaic  | 20 g | 60 min | 11.8 % |
| Whirlpool | Simcoe  | 20 g | 60 min | 13.3 % |

## Yeasts

| Name                              | Type | Form | Amount | Laboratory      |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 11 g   | Mangrove Jack's |

## Extras

| Type        | Name  | Amount | Use for | Time   |
|-------------|-------|--------|---------|--------|
| Water Agent | kreda | 5 g    | Mash    | 80 min |
| Fining      | mech  | 5 g    | Boil    | 15 min |