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 %

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

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