

10#AS16

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **64**
- SRM **26.5**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.3 liter(s)**
- Total mash volume **26.1 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **68 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **20.3 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **15 min** at **68C**
- Keep mash **90 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.9 kg (67.2%)	79 %	6
Grain	Monachijski	1.2 kg (20.7%)	80 %	16
Grain	Caramel/Crystal Malt - 30L	0.3 kg (5.2%)	75 %	59
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.4%)	68 %	1200
zacieranie 15 min				
Grain	Strzegom pszenica prażona	0.2 kg (3.4%)	70 %	1000
zacieranie 15 min				

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	35 g	60 min	15.5 %
Boil	Cascade	50 g	10 min	6 %
Dry Hop	Mosaic	50 g	4 day(s)	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	10 g	Mangrove Jack's