MapALE

- Gravity **14.1 BLG**
- ABV **---**
- IBU **67**
- SRM **6.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.8 liter(s)**
- Total mash volume **22.9 liter(s)**

Steps

- Temp **66 C**, Time **75 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **17.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **0 min** at **76C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg *(78.4%)*	79 %	6
Grain	Pszeniczny	0.5 kg *(9.8%)*	85 %	4
Grain	Monachijski	0.5 kg *(9.8%)*	80 %	16
Grain	Strzegom Karmel 30	0.1 kg *(2%)*	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	50 min	12.5 %
Boil	Dr Rudi	15 g	30 min	11 %
Boil	Dr Rudi	20 g	25 min	11 %
Aroma (end of boil)	Dr Rudi	20 g	10 min	11 %
Aroma (end of boil)	Centennial	10 g	5 min	8.5 %
Whirlpool	Centennial	20 g	0 min	8.5 %
Dry Hop	Centennial	70 g	5 day(s)	8.5 %

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