American apacz

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **46**
- SRM **5.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **50.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33.7 liter(s)**
- Total mash volume **44.9 liter(s)**

Steps

- Temp **50 C**, Time **30 min**
- Temp **67 C**, Time **40 min**
- Temp **71 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **33.7 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **30 min** at **50C**
- Keep mash **40 min** at **67C**
- Keep mash **10 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **28.1 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.8 kg *(33.9%)*	80 %	5
Grain	Castle Pale Ale	7.2 kg *(64.2%)*	80 %	8
Grain	Karmelowy Czerwony	0.22 kg *(2%)*	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	40 g	60 min	12 %
Boil	Cascade	10 g	20 min	7 %
Boil	Mosaic	10 g	20 min	12 %
Boil	Cascade	5 g	5 min	7 %
Boil	Mosaic	20 g	5 min	12 %
Boil	Sladek	20 g	20 min	6 %
Boil	Sladek	25 g	5 min	6 %
Whirlpool	Cascade	20 g	20 min	6 %
Whirlpool	Mosaic	30 g	20 min	10 %

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