Spanish consonants, IPA

	Bilabial		Labio- dental		Dental		Alveolar		Palatal		Velar		Uvular	
Plosive	р	[b]			t	[d]					k	[g]		
Affricate									tſ	(jj)				
Fricative	[φ]	β	f	[v]	θ	ð	S		[ʃ]	j	х	γ	[χ]	
Nasal		m		[m]		[<u>n</u>]		n		ŋ		[ŋ]	[N]	
Trill								r						
Тар								١						
Approximant		W								j		[ɰ]		
Lateral approximant						[∐]		I		λ				

- Where symbols appear in pairs, the one to the right represents a voiced consonant.
- Where symbols appear singly, they are placed to the left within their column if they represent a voiceless consonant (e.g. [x]), and to the right for voiced consonants (e.g. [w]).
- Symbols enclosed in brackets represent non-phonemic consonants.
- Blacked-out cells indicate sounds judged to be impossible.

- Dental plosives /t,d/ are in fact denti-alveolar, with tongue blade touching alveolar ridge while tongue tip touches upper front teeth.
- The palatal consonants are a combination of postalveolars (for voiceless phonemes) and true palatals (voiced).
- Voiced plosives [b,d,g] and affricate [jj] are not the default allophones of their associated phonemes. The default allophone is either a fricative $[\beta,\tilde{\delta},\gamma,j]$ or approximant [w,u,j], depending on dialect. We have chosen to mark the fricatives as phonemic.



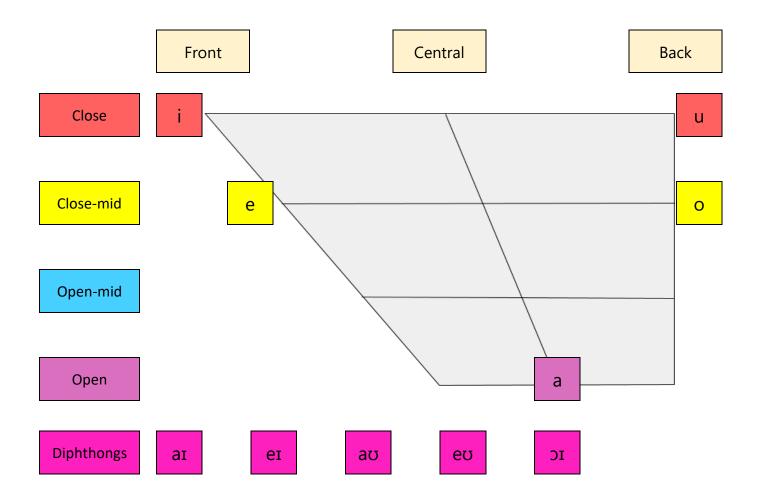
Spanish consonants, Roman alphabet

	Bilabial		Labio- dental		Dental		Alveolar		Palatal		Velar		Uvular	
Plosive	р	(b)			t	(d)					k	(g)		
Affricate									ch	(y, II)				
Fricative	(f)	b, v	f	(b,v)	Z	đ	S		(II)	y, (II)	х, ј	g	(x, j)	
Nasal		m		(n)		(n)		n		ñ		(n)	(n)	
Trill								rr						
Тар								r						
Approximant		gu, (b)								Ш		(g)		
Lateral approximant						(l)		T		(l)				

• Symbols enclosed in parentheses represent non-phonemic consonants.



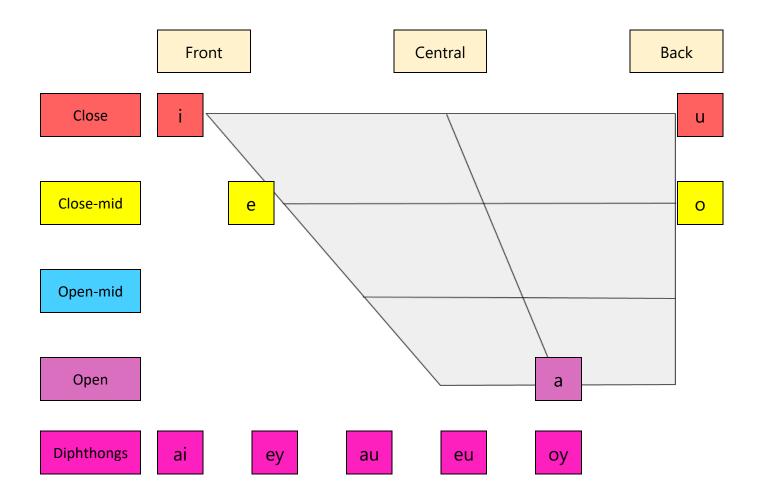
Spanish vowels, IPA



- Back vowels are rounded; front and central vowels are unrounded.
- Instead of the front vowel /a/ or the back vowel /a/, Spanish has a low central vowel, represented by either of these symbols. The choice of /a/ here is arbitrary.



Spanish vowels, Roman alphabet



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References

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